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April 15, 2016

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Remediation and Reuse Branch
Land and Chemicals Division
United States Environmental Protection Agency, Region 5
77 West Jackson Boulevard, LU-9J
Chicago, IL 60604

Subject: Progress Report, Fourth Quarter 2015 and First Quarter 2016
MAHLE Behr Properties Management, LLC
250 Northwoods Blvd.
Vandalia, Ohio
US EPA ID #OH0 000 048 454

Dear Ms. Greensley:

This submittal constitutes the progress report for work undertaken during the Fourth Quarter of 2015 and First Quarter of 2016, related to the above-referenced Facility. As you are aware, MAHLE Behr Properties Management, LLC ("MAHLE") acquired the Vandalia Facility from Delphi Automotive Systems, LLC ("Delphi") on June 30, 2015. The work described herein includes ongoing activities undertaken by MAHLE in accordance with the Delphi Automotive Systems LLC ("Old Delphi") RCRA 3008(h) Administrative Order on Consent, Docket No. R8H-5-02-001, January 22, 2002. MAHLE, pursuant to the terms of the purchase agreement between MAHLE and Delphi, has continued to operate the system and manage the project while MAHLE and the United States Environmental Protection Agency ("EPA") negotiate a new Administrative Order on Consent.

Work Performed Fourth Quarter 2015 (October 1, 2015 – December 31, 2015) and First Quarter 2016 (January 1, 2016 – March 31, 2016)

- Groundwater samples from fifty-two (52) monitoring wells, consisting of six (6) Top-of-Rock, one (1) Middle Brassfield, fourteen (14) Sugar Rock, and thirty-one (31) Overburden locations, were collected and analyzed during the First Quarter 2016 as part of the routine sampling program (Figure 1, Tables 1 and 2).

- Surface water samples from two (2) locations along the unnamed tributary of North Creek and nine (9) Sugar Rock spring locations were collected and analyzed during the Fourth Quarter 2015 and First Quarter 2016 (Figures 2 and 3, Table 3).

- Conducted six (6) rounds of Sugar Rock and Intermediate Bedrock water level measurements, two (2) rounds of Top-of-Rock water level measurements, and two (2) rounds of Overburden water level measurements (Figures 4-17; Attachment A).

- Collected and analyzed monthly samples from groundwater migration control system monitoring points, including Sugar Rock and Overburden (Water Table/First Sand and Second Sand) influent streams prior to treatment, and treated groundwater effluent for NPDES compliance (Table 4).
- Sampled a private potable water well at 10440 Cassel Road on October 29, 2015, as part of ongoing semi-annual monitoring at this location.

- Transmitted results of private well sampling at 10440 Cassel Road to the property owner. Results show no detections of constituents of concern.

- Continued to operate the groundwater migration control system. Fourth Quarter 2015 and First Quarter 2016 monthly discharge reports, system activity logs, site inspection checklists, and system shutdown reports are included in Attachments C-F, respectively.

- Replaced the granular activated carbon (GAC) pump (handling discharge from the air stripper sump) and removed solids accumulation in the influent port to the air stripper float control assembly on November 20, 2015.

- Replaced Second Sand groundwater recovery well pump on March 17, 2016.

- Performed an acid chemical wash of the air stripper and associated piping on March 21, 2016.

- Continued to monitor water levels in the Top-of-Rock interval using pressure transducers as part of an evaluation of recently observed changes in groundwater flow patterns. Transducers were deployed in five selected Top-of-Rock wells on November 6, 2015. Collection and review of data are continuing.

- Continued discussions with Spears Property Management (Spears) regarding long-term access to their property, including planned installation of one new overburden monitoring well (referenced as Well A in the 2013 Three-year Assessment) and long-term monitoring of groundwater and surface water. This property consists of approximately 17.2 acres located northeast of the intersection of Northwoods Blvd. and Dixie Drive between the (Pilot) Flying J Travel Center and the Dayton International Airport. Twelve existing monitoring wells and one surface water sampling point are located on this property. Although Spears had initially indicated that they planned to develop the property as a truck terminal and warehouse, they now indicate that the property is for sale. Continued access for monitoring on this property is provided through the existing Environmental Covenant recorded March 11, 2008. A proposed "Right of Access Agreement" was sent to Spears on August 11, 2015 via email, fax, and USPS, but MAHLE has yet to receive a response regarding the submission. A follow-up email was sent December 7, 2015, but again, there has been no response. MAHLE will continue to periodically pursue an access agreement with Spears covering installation of the new well and long-term access for monitoring, although given Spear's lack of response to MAHLE, and to Delphi before that, it is unlikely that further attempts will elicit a response.

- Completed delineation of PCBs in subslab soils in the western portion of the site during the week of December 7, 2015. The work consisted of nine (9) Geoprobe borings advanced to a depth of approximately ten feet below ground surface.

- Conducted two rounds of sampling associated with investigation of intermittent elevated TCE concentrations in the unnamed tributary to North Creek. December 2015 sampling included collection of ten (10) grab samples covering surface water, storm sewer discharges to the Post 3 junction box, and related storm sewer manholes. An additional round of sampling during March 2016 included thirteen (13) grab samples.

- Conducted short-duration pumping tests at Top-of-Rock wells MW-422S and MW-424S between late September and early October, 2015. This preliminary testing was conducted to support evaluation of remedial alternatives to potentially reduce VOC concentrations in the Top-of-Rock zone and to shorten the duration of groundwater migration control activities.

Data Collected

- Groundwater samples were collected from fifty-two (52) monitoring wells during First Quarter 2016 and analyzed for VOCs. The analytical results for groundwater sampling during the First Quarter 2016 are included in Table 2. The First Quarter 2016 TCE concentrations in Sugar Rock groundwater are shown on Figure 18.

- Analytical results for surface water samples collected at the unnamed tributary to North Creek and Sugar Rock outcrop springs are included in Table 3. Surface water TCE results are illustrated on Figure 2; Sugar Rock spring TCE and DCE results are shown on Figure 3.

- Analytical results for monthly migration control system samples are presented in Table 4.

- Forty-five (45) soil samples were collected from nine (9) soil borings to complete delineation of PCBs at concentrations exceeding 1 mg/kg in soils under the former Building 31 concrete slab. Results will be summarized in a separate report.

- Ten (10) samples were collected from surface water, storm sewer outfalls, and manholes during one round of sampling in December 2015, related to investigation of intermittent elevated TCE concentrations in the unnamed tributary to North Creek. Thirteen (13) samples were collected during a subsequent round of sampling during March 2016. Results will be summarized in a separate report after completion of the investigation.

Performance Evaluation and Problems Encountered

- The bedrock groundwater migration control system was operational for approximately 92% of the Fourth Quarter 2015 and First Quarter 2016. System downtime was related primarily to maintenance issues including: backwashing of the carbon filters, restriction of flow between the air stripper sump and float control, replacement of GAC pump, performance of an acid wash, modifications of piping, repairs of hose fittings, and failure of a building sump pump. The primary downtime of 10 days was caused by high water levels in the air stripper sump resulting from a buildup of solids in the float control assembly. After cleaning of the float control influent port, system uptime has been approximately 97%.

- DNAPL recovery wells were inspected for the presence of DNAPL in both the Fourth Quarter 2015 and First Quarter 2016. Based on bailer checks, no wells contained visible DNAPL; accordingly, no DNAPL recovery was performed during these quarters.

- Results from ten (10) groundwater monitoring samples collected during First Quarter 2016 were flagged due to exceedance of holding times related to data entry errors and computer problems at the analytical laboratory. Detections in these samples were flagged as "J-" values (estimated results, biased low); non-detect results were flagged as rejected.

- The Second Sand recovery well pump failed on December 23, 2015. This pump has typically been replaced on a frequency of approximately 14 months. An engineering review of the cause of the

failures indicates that the pumps were oversized and prone to overheating when valved back to reduce flow rates. A smaller-capacity pump has been installed and is currently in operation. This change is expected to increase the future operating life of the Second Sand pump.

- A new planned overburden well, identified in the sampling schedule as Well A, has not yet been installed. Installation of this well, to be located on Spears property north of Northwoods Blvd., has been delayed pending finalization of an access agreement with the property owner. MAHLE will continue to work with Spears to secure approval to install the well.

- Shifting patterns of groundwater flow in the Top-of-Rock interval are currently being evaluated using pressure transducers, which have been deployed in five Top-of-Rock wells. Since January, 2014, a hydraulic low related to downward flow of groundwater from the Top-of-Rock interval to the Sugar Rock interval (where it is captured by the Groundwater Migration Control System) appears to have shifted. Prior to this date, the center of this feature was located near MW-424S, which consistently exhibited the lowest water level compared to surrounding Top-of-Rock wells. Since this date, MW-423S has exhibited the lowest water level in the immediate vicinity. A surface geophysical survey is planned to attempt to identify the nature and location of the inferred vertical conduit (possibly an abandoned water supply well) allowing downward groundwater flow. The outcome of this work will be presented to the EPA in a separate document at a future date.

- Fluctuating TCE concentrations have been observed at MW-413D, located approximately 600 feet north of the deep bedrock recovery well. Prior to 2012, groundwater samples from this well, located within the capture zone of the deep bedrock recovery well, typically contained TCE at concentrations ranging from non-detect to 500 ug/l. Since 2012, however, concentration peaks of 1,400, 1,500, and 7,600 ug/l have occurred between July 2012 and May 2015. Corresponding concentration peaks of 530, 960, and 2,900 ug/l, respectively, have also been observed for cis-1,2-DCE. Concentrations at MW-413D have recently returned to historical levels, with the most recent groundwater sample, collected in January 2016, containing TCE at 0.22 ug/l and cis-1,2-DCE at 9.0 ug/l. The cause of the concentration peaks is uncertain, but may be related to expansion and contraction of the bedrock plume near the recovery well as the balance between recharge to the Sugar Rock aquifer and pumping at the recovery well fluctuates seasonally. The recent return to low VOC concentrations at MW-413D may be related to increased pumping in the deep bedrock recovery well enabled by recent corrections to the float control assembly on the air stripper sump. It is important to note that VOC concentrations in nearby downgradient bedrock wells have exhibited no significant changes during the period of pronounced concentration fluctuations at MW-413D. The next sampling of MW-413D is planned for the Fourth Quarter, 2016.

- VOC concentrations above historical ranges have been detected in groundwater samples from Top-of-Rock well MW-425S, located north of Northwoods Blvd. on Pilot property. While concentrations of TCE are typically below 400 ug/l in this well, the most recent three samples collected from this well in 2015 and 2016 had TCE concentrations ranging from 470 to 701 ug/l. Concentrations of cis-1,2-DCE were similarly elevated, ranging from 320 to 410 ug/l. While potentiometric surface maps indicate that MW-425S falls within the capture zone of the Top-of-Rock groundwater depression, concentration trends in this well will continue to be closely monitored. VOC concentrations at downgradient wells MW-426S and MW-446SR remain below or near detectable limits for VOCs.

- Rising VOC concentrations have been observed at Water Table monitoring well MW-806. While historical VOC concentrations in this well have been at or near detectable limits, concentrations in groundwater samples collected between 2014 and 2016 have exhibited pronounced rising trends for several compounds. Concentrations of cis-1,2-DCE have risen from below detectable limits to 16,000

ug/l in the most recent sample collected in February, 2016. Also, concentrations of 1,1-DCA and vinyl chloride have risen from below detectable limits to 290 ug/l and 36 ug/l, respectively, in the most recent sample. Recently installed downgradient monitoring well MW-814, which is screened across the Water Table and First Sand intervals, has shown no detections of VOCs. The rising concentration trends at MW-806 suggest locally changing site conditions – a topic that will be discussed further in the upcoming Three-Year Assessment Report for the facility.

- Intermittent elevated VOC concentrations have been observed in surface water samples collected from the unnamed tributary to North Creek. The series of concentration peaks, which typically occur during wetter seasons, exhibit a generally increasing trend in VOC concentrations. An investigation to identify possible sources of VOCs in surface water is currently in progress.

Project Schedule

- An updated project schedule is included in Attachment G.

Feel free to contact me at (248) 743-3758 if you have any questions or require additional information.

Sincerely,

James Hunt
Project Manager for MAHLE Behr Properties, LLC
MAHLE Industries, Inc.
jim.hunt@us.mahle.com

Enclosures:

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1 2015-2016 Groundwater Sampling/Water Level Measurements
2 Fourth Quarter 2015 and First Quarter 2016 Analytical Results, Overburden and Bedrock Monitoring Wells
3 Fourth Quarter 2015 and First Quarter 2016 Analytical Results, Surface Water and Sugar Rock Spring Samples
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7 Potentiometric Surface Contours, First Sand Zone, 7 January 2016
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B Data Usability Summary Reports
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D Groundwater Migration Control System Activity Log
E Groundwater Migration Control System Inspection Checklists
F Bedrock Groundwater Migration Control System Shutdown Reports
G Project Schedule

Tables

TABLE 1
2015-2016 GROUNDWATER SAMPLING / WATER LEVEL MEASUREMENTS
MAHLE BEHR DAYTON LLC - VANDALIA, OHIO

Sampling

Location	Unit	Frequency	4Q-2015	1Q-2016	2Q-2016	3Q-2016
CSX-18D	SR	15 months		✓		
MW-402D	SR	15 months		✓		
MW-411D	SR	15 months		✓		
MW-412D	SR	15 months		✓		
MW-413D	SR	9 months		✓		
MW-416D	SR	9 months		✓		
MW-417D	SR	9 months		✓		
MW-418D	SR	9 months		✓		
MW-420M	MB	9 months		✓		
MW-420D	SR	9 months		✓		
MW-424D	SR	15 months		✓		
MW-434D	SR	15 months		✓		
MW-435D	SR	15 months		✓		
MW-444D	SR	15 months		✓		
MW-453D	SR	15 months		✓		
MW-301S	TOR	15 months		✓		
MW-415S	TOR	15 months		✓		
MW-425S	TOR	9 months		✓		
MW-426S	TOR	15 months		✓		
MW-445S	TOR	15 months		✓		
MW-446S	TOR	15 months		✓		
MW-784	WT	15 months		✓		
MW-806	WT	9 months		✓		
MW-810	WT	9 months		✓		
MW-607	WT/S1	9 months		✓		
MW-729	WT/S1	15 months		✓		
MW-734	WT/S1	15 months		✓		
MW-775	WT/S1	9 months		✓		
MW-793	WT/S1	15 months		✓		
MW-796	WT/S1	15 months		✓		
MW-776	WT/S1	9 months		✓		
VPW-103	WT/S1	15 months		✓		
MW-730	S1	9 months		✓		
MW-732	S1	9 months		✓		
MW-809	S1/S2	15 months		✓		
MW-787	WT	15 months		✓		
MW-715	S1	15 months		✓		
Well A*	S1	9 months		✓		
MW-814	WT/S1	9 months		✓		
MW-815	WT/S1	9 months		✓		
MW-515	S2	15 months		✓		
MW-605	S2	9 months		✓		
MW-717	S2	9 months		✓		
MW-725	S2	9 months		✓		
MW-731	S2	9 months		✓		
MW-740	S2	9 months		✓		
MW-741	S2	9 months		✓		
MW-742	S2	15 months		✓		
MW-743	S2	9 months		✓		
MW-746	S2	15 months		✓		
MW-759	S2	9 months		✓		
MW-800	S2	9 months		✓		
MW-807	S2	15 months		✓		
SW-1	North Creek	Quarterly	✓	✓	✓	✓
SW-4	North Creek	Quarterly	✓	✓	✓	✓
B005	SR Spring	9 months		✓		
B006	SR Spring	9 months		✓		
C001	SR Spring	9 months		✓		
D001	SR Spring	9 months		✓		
E001	SR Spring	9 months		✓		
E002	SR Spring	9 months		✓		
F001	SR Spring	9 months		✓		
G004	SR Spring	9 months		✓		
G006	SR Spring	9 months		✓		

Water Level Measurements

Unit	Frequency
All SR / MB wells	Monthly
All TOR wells	Quarterly
All Overburden wells	Quarterly

Unit Key

Unit	Description
WT	Water Table
S1	First Sand
S2	Second Sand
TOR	Top Of Rock
MB	Middle Brassfield
SR	Sugar Rock

Notes:

1. * Denotes wells to be installed and their sampling schedule. Actual well nomenclature will be made after installation.

TABLE 2
FOURTH QUARTER 2015 & FIRST QUARTER 2016 ANALYTICAL RESULTS
OVERBURDEN AND BEDROCK MONITORING WELLS
MAHLE BEHR DAYTON LLC - VANDALIA, OHIO

Location	CSX-18D	MW-301S	MW-402D	MW-411D	MW-412D	MW-412D	MW-413D	MW-415S	MW-415S
Sample Date	02/03/2016	01/27/2016	01/29/2016	01/29/2016	01/29/2016	01/29/2016	01/27/2016	01/26/2016	01/26/2016
	SR	TOR	SR	SR	SR	SR	SR	TOR	TOR
Sample Type	N	N	N	N	N	FD	N	N	FD
Volatile Organic Compounds (ug/L)									
1,1,1-Trichloroethane	1 R	< 1	< 1	< 20	< 10	< 8	< 1	< 1	< 1
1,1-Dichloroethane	1 R	< 1	< 1	< 20	< 10	< 8	< 1	< 1	< 1
1,1-Dichloroethene	1 R	< 1	< 1	< 20	< 10	< 8	< 1	< 1	< 1
Acetone	10 R	< 10	< 10	< 200	< 100	< 80	< 10	< 10	< 10
Benzene	1 R	< 1	< 1	< 20	< 10	< 8	< 1	< 1	< 1
Chloroethane	1 R	< 1	< 1	< 20	< 10	< 8	< 1	< 1	< 1
Chloroform (Trichloromethane)	1 R	< 1	< 1	< 20	< 10	< 8	< 1	< 1	< 1
cis-1,2-Dichloroethene	**8.9 J-**	< 1	< 1	**510**	**13**	**13**	**9**	**1**	**1**
trans-1,2-Dichloroethene	1 R	< 1	< 1	**14 J**	**3.8 J**	**3.2 J**	< 1	< 1	< 1
Trichloroethene	1 R	< 1	< 1	**420**	**220**	**210**	**0.22 J**	**0.74 J**	**0.69 J**
Trichlorofluoromethane (CFC-11)	1 R	< 1	< 1	< 20	< 10	< 8	< 1	< 1	< 1
Vinyl chloride	**0.3 J-**	< 1	< 1	< 20	< 10	< 8	< 1	< 1	< 1

Notes and Abbreviations:

1. Summary includes VOC compounds detected in one or more samples.
2. Analysis method SW8260.
3. See Figure 1 for sample locations.
4. <: Result is below the indicated reporting limit.
   J: Estimated result.
   J-: Estimated result, biased low
   R: Rejected during validation
5. Sample type codes: N - Normal, FD - Field Duplicate

TABLE 2
FOURTH QUARTER 2015 & FIRST QUARTER 2016 ANALYTICAL RESULTS
OVERBURDEN AND BEDROCK MONITORING WELLS
MAHLE BEHR DAYTON LLC - VANDALIA, OHIO

Location	MW-416D	MW-417D	MW-417D	MW-418D	MW-420D	MW-420M	MW-424D	MW-425S	MW-426S
Sample Date	02/02/2016	02/02/2016	02/02/2016	02/02/2016	01/26/2016	01/26/2016	01/29/2016	01/28/2016	01/27/2016
	SR	SR	SR	SR	SR	MB	SR	TOR	TOR
Sample Type	N	N	FD	N	N	N	N	N	N
Volatile Organic Compounds (ug/L)									
1,1,1-Trichloroethane	< 2	< 1.3	< 1.3	< 1	< 22	< 25	< 3.3	< 20	< 1
1,1-Dichloroethane	< 2	< 1.3	< 1.3	**1.1**	< 22	< 25	< 3.3	**14 J**	< 1
1,1-Dichloroethene	< 2	< 1.3	< 1.3	< 1	< 22	< 25	< 3.3	< 20	< 1
Acetone	< 20	< 13	< 13	< 10	< 220	< 250	< 33	**23 J**	< 10
Benzene	< 2	< 1.3	< 1.3	< 1	< 22	< 25	< 3.3	< 20	< 1
Chloroethane	< 2 J	< 1.3 J	< 1.3 J	< 1 J	< 22	< 25	< 3.3	< 20	< 1
Chloroform (Trichloromethane)	< 2	< 1.3	< 1.3	< 1	< 22	< 25	< 3.3	< 20	< 1
cis-1,2-Dichloroethene	**43**	**21**	**22**	**25**	**660**	**660**	**3.2 J**	**410**	< 1
trans-1,2-Dichloroethene	< 2	< 1.3	< 1.3	**0.36 J**	< 22	**7.9 J**	< 3.3	< 20	< 1
Trichloroethene	< 2	**0.37 J**	< 1.3	< 1	< 22	**370**	**93**	**520**	< 1
Trichlorofluoromethane (CFC-11)	< 2	< 1.3	< 1.3	< 1	< 22	< 25	< 3.3	< 20	< 1
Vinyl chloride	**15**	**23**	**24**	**32**	**29**	**16 J**	< 3.3	< 20	< 1

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OVERBURDEN AND BEDROCK MONITORING WELLS
MAHLE BEHR DAYTON LLC - VANDALIA, OHIO

Location	MW-434D	MW-435D	MW-444D	MW-445S	MW-446SR	MW-453D	MW-515	MW-605	MW-607
Sample Date	02/03/2016	02/04/2016	02/03/2016	01/28/2016	01/27/2016	02/03/2016	01/27/2016	01/29/2016	02/01/2016
	SR	SR	SR	TOR	TOR	SR	S2	S2	WT/S1
Sample Type	N	N	N	N	N	N	N	N	N
Volatile Organic Compounds (ug/L)									
1,1,1-Trichloroethane	1 R	1 R	2 R	< 1	< 1	< 1	< 1	< 1	**0.46 J**
1,1-Dichloroethane	1 R	1 R	2 R	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethene	1 R	1 R	2 R	< 1	< 1	< 1	< 1	< 1	< 1 J
Acetone	10 R	10 R	20 R	< 10	< 10	< 10	< 10	< 10	< 10 J
Benzene	1 R	1 R	2 R	< 1	< 1	< 1	< 1	< 1	< 1
Chloroethane	1 R	1 R	2 R	< 1	< 1	< 1 J	< 1	< 1	< 1
Chloroform (Trichloromethane)	1 R	1 R	2 R	< 1	< 1	< 1	< 1	< 1	**2.2**
cis-1,2-Dichloroethene	1 R	**15 J-**	2 R	**0.41 J**	< 1	**30**	< 1	< 1	**1.6**
trans-1,2-Dichloroethene	1 R	1 R	2 R	< 1	< 1	**0.71 J**	< 1	< 1	< 1
Trichloroethene	1 R	**11 J-**	2 R	< 1	< 1	**21**	**0.3 J**	**0.57 J**	**13**
Trichlorofluoromethane (CFC-11)	1 R	1 R	2 R	< 1	< 1	< 1	< 1	< 1	**0.58 J**
Vinyl chloride	1 R	1 R	2 R	< 1	< 1	< 1	< 1	< 1	< 1

Notes and Abbreviations:

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2. Analysis method SW8260.
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OVERBURDEN AND BEDROCK MONITORING WELLS
MAHLE BEHR DAYTON LLC - VANDALIA, OHIO

Location	MW-715	MW-717	MW-725	MW-729	MW-730	MW-731	MW-732	MW-734	MW-740
Sample Date	02/04/2016	02/01/2016	02/01/2016	02/01/2016	01/27/2016	02/01/2016	02/02/2016	02/01/2016	01/26/2016
	S1	S2	S2	WT/S1	S1	S2	S1	WT/S1	S2
Sample Type	N	N	N	N	N	N	N	N	N
Volatile Organic Compounds (ug/L)									
1,1,1-Trichloroethane	1 R	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethane	1 R	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethene	1 R	< 1 J	< 1 J	< 1 J	< 1	< 1 J	< 1	< 1 J	< 1
Acetone	10 R	< 10 J	< 10 J	< 10 J	< 10	< 10 J	< 10	< 10 J	< 10
Benzene	1 R	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chloroethane	1 R	< 1	< 1	< 1	< 1	< 1	< 1 J	< 1	< 1
Chloroform (Trichloromethane)	1 R	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
cis-1,2-Dichloroethene	1 R	< 1	< 1	< 1	**3.3**	< 1	< 1	< 1	< 1
trans-1,2-Dichloroethene	1 R	< 1	< 1	< 1	**0.53 J**	< 1	< 1	< 1	< 1
Trichloroethene	1 R	< 1	< 1	< 1	**2.6**	< 1	< 1	**0.22 J**	< 1
Trichlorofluoromethane (CFC-11)	1 R	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Vinyl chloride	1 R	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

Notes and Abbreviations:

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2. Analysis method SW8260.
3. See Figure 1 for sample locations.
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5. Sample type codes: N - Normal, FD - Field Duplicate

TABLE 2
FOURTH QUARTER 2015 & FIRST QUARTER 2016 ANALYTICAL RESULTS
OVERBURDEN AND BEDROCK MONITORING WELLS
MAHLE BEHR DAYTON LLC - VANDALIA, OHIO

Location	MW-741	MW-742	MW-743	MW-746	MW-759	MW-775	MW-776	MW-784	MW-784
Sample Date	01/28/2016	02/03/2016	02/01/2016	02/01/2016	01/26/2016	01/26/2016	01/26/2016	02/02/2016	02/02/2016
	S2	S2	S2	S2	S2	WT	WT/S1	WT	WT
Sample Type	N	N	N	N	N	N	N	N	FD
Volatile Organic Compounds (ug/L)									
1,1,1-Trichloroethane	< 1	< 1	< 1	< 1	< 1.4	< 1	< 1	< 1	< 1
1,1-Dichloroethane	< 1	< 1	< 1	< 1	< 1.4	< 1	< 1	< 1	< 1
1,1-Dichloroethene	< 1	< 1	< 1 J	< 1 J	< 1.4	< 1	< 1	< 1	< 1
Acetone	< 10	< 10	< 10 J	< 10 J	< 14	< 10	< 10	< 10	< 10
Benzene	< 1	< 1	< 1 J	< 1	< 1.4	< 1	< 1	< 1	< 1
Chloroethane	< 1	< 1 J	< 1	< 1	< 1.4	< 1	< 1	< 1 J	< 1 J
Chloroform (Trichloromethane)	< 1	< 1	< 1	< 1	< 1.4	< 1	< 1	< 1	< 1
cis-1,2-Dichloroethene	< 1	**10**	< 1	< 1	**39**	< 1	< 1	< 1	< 1
trans-1,2-Dichloroethene	< 1	**0.37 J**	< 1	< 1	**2.5**	< 1	< 1	< 1	< 1
Trichloroethene	< 1	**4.4**	< 1 J	< 1	**6.7**	< 1	< 1	< 1	< 1
Trichlorofluoromethane (CFC-11)	< 1	< 1	< 1	< 1	< 1.4	< 1	< 1	< 1	< 1
Vinyl chloride	< 1	**4.9**	< 1	< 1	**21**	< 1	< 1	< 1	< 1

Notes and Abbreviations:

1. Summary includes VOC compounds detected in one or more samples.
2. Analysis method SW8260.
3. See Figure 1 for sample locations.
4. <: Result is below the indicated reporting limit.
   J: Estimated result.
   J-: Estimated result, biased low
   R: Rejected during validation
5. Sample type codes: N - Normal, FD - Field Duplicate

TABLE 2
FOURTH QUARTER 2015 & FIRST QUARTER 2016 ANALYTICAL RESULTS
OVERBURDEN AND BEDROCK MONITORING WELLS
MAHLE BEHR DAYTON LLC - VANDALIA, OHIO

Location	MW-787	MW-787	MW-793	MW-796	MW-800	MW-806	MW-807	MW-807	MW-809
Sample Date	02/04/2016	02/04/2016	02/04/2016	02/02/2016	01/26/2016	02/04/2016	02/04/2016	02/04/2016	02/04/2016
	WT	WT	WT/S1	WT/S1	S2	WT	S2	S2	S1/S2
Sample Type	N	FD	N	N	N	N	N	FD	N
Volatile Organic Compounds (ug/L)									
1,1,1-Trichloroethane	1 R	1 R	1 R	< 1	< 1	< 1	< 1	1 R	< 1
1,1-Dichloroethane	**0.91 J-**	**0.96 J-**	1 R	< 1	< 1	**290**	< 1	1 R	< 1
1,1-Dichloroethene	1 R	1 R	1 R	< 1	< 1	**78**	< 1	1 R	< 1
Acetone	10 R	10 R	10 R	< 10	< 10	< 10 J	< 10 J	10 R	< 10 J
Benzene	1 R	1 R	1 R	< 1	< 1	**0.56 J**	< 1	1 R	< 1
Chloroethane	1 R	1 R	1 R	< 1 J	< 1	**56**	< 1	1 R	< 1
Chloroform (Trichloromethane)	1 R	1 R	1 R	**0.33 J**	< 1	< 1	< 1	1 R	< 1
cis-1,2-Dichloroethene	**88 J-**	**96 J-**	1 R	< 1	< 1	**16000**	**1.1**	**0.73 J-**	**17**
trans-1,2-Dichloroethene	**96 J-**	**99 J-**	1 R	< 1	< 1	**300**	< 1	1 R	**1**
Trichloroethene	**100 J-**	**100 J-**	1 R	< 1	< 1	< 1	< 1	1 R	**34**
Trichlorofluoromethane (CFC-11)	1 R	1 R	1 R	< 1	< 1	< 1	< 1	1 R	< 1
Vinyl chloride	1 R	1 R	1 R	< 1	< 1	**36**	< 1	1 R	< 1

Notes and Abbreviations:

1. Summary includes VOC compounds detected in one or more samples.
2. Analysis method SW8260.
3. See Figure 1 for sample locations.
4. <: Result is below the indicated reporting limit.
   J: Estimated result.
   J-: Estimated result, biased low
   R: Rejected during validation
5. Sample type codes: N - Normal, FD - Field Duplicate

TABLE 2
FOURTH QUARTER 2015 & FIRST QUARTER 2016 ANALYTICAL RESULTS
OVERBURDEN AND BEDROCK MONITORING WELLS
MAHLE BEHR DAYTON LLC - VANDALIA, OHIO

Location	MW-810	MW-814	MW-814	MW-815	VPW-103
Sample Date	02/02/2016	02/03/2016	02/03/2016	02/05/2016	01/28/2016
	WT	WT/S1	WT/S1	WT/S1	WT/S1
Sample Type	N	N	FD	N	N
Volatile Organic Compounds (ug/L)					
1,1,1-Trichloroethane	< 1	< 1	< 1	1 R	< 1
1,1-Dichloroethane	< 1	< 1	< 1	1 R	< 1
1,1-Dichloroethene	< 1	< 1	< 1	1 R	< 1
Acetone	< 10	< 10	< 10	10 R	< 10
Benzene	< 1	< 1	< 1	1 R	< 1
Chloroethane	< 1 J	< 1 J	< 1 J	1 R	< 1
Chloroform (Trichloromethane)	< 1	< 1	< 1	1 R	< 1
cis-1,2-Dichloroethene	< 1	< 1	< 1	1 R	< 1
trans-1,2-Dichloroethene	< 1	< 1	< 1	1 R	< 1
Trichloroethene	< 1	< 1	< 1	1 R	< 1
Trichlorofluoromethane (CFC-11)	< 1	< 1	< 1	1 R	< 1
Vinyl chloride	< 1	< 1	< 1	1 R	< 1

Notes and Abbreviations:

1. Summary includes VOC compounds detected in one or more samples.
2. Analysis method SW8260.
3. See Figure 1 for sample locations.
4. <: Result is below the indicated reporting limit.
   J: Estimated result.
   J-: Estimated result, biased low
   R: Rejected during validation
5. Sample type codes: N - Normal, FD - Field Duplicate

TABLE 3
FOURTH QUARTER 2015 AND FIRST QUARTER 2016 ANALYTICAL RESULTS
SURFACE WATER AND SUGAR ROCK SPRING SAMPLES
MAHLE BEHR DAYTON LLC - VANDALIA, OHIO

Location Group	North Creek					Spring					
Location	SW-1	SW-1	SW-4	SW-4	SW-4	B005	B006	C001	D001	E001	E002
Sample Date	12/16/2015	01/14/2016	12/16/2015	01/14/2016	3/16/2016	01/14/2016	01/14/2016	01/14/2016	01/14/2016	01/14/2016	01/14/2016
Sample Type	N	N	N	N	N	N	N	N	N	N	N
Volatile Organic Compounds (ug/L)											
1,1,1-Trichloroethane	< 1	**1.6**	**2.8**	**4.4**	< 1	< 1	< 1	< 1.4	< 2.5	< 1.4	< 1
1,1-Dichloroethane	< 1	< 1	**0.53 J**	< 2	< 1	< 1	< 1	< 1.4	< 2.5	< 1.4	< 1
Chloroform (Trichloromethane)	< 1	< 1	< 1.3	< 2	< 1	< 1	< 1	< 1.4	< 2.5	< 1.4	< 1
cis-1,2-Dichloroethene	**0.72 J**	**9.5**	**18**	**27**	< 1	**0.56 J**	**0.69 J**	**13**	**5.9**	**9.7**	**0.31 J**
trans-1,2-Dichloroethene	< 1	< 1	< 1.3	< 2	< 1	< 1	< 1	**0.86 J**	**1.8 J**	**0.94 J**	< 1
Trichloroethene	**1.1**	**19**	**35**	**57**	**1.1**	**2.2**	**2.5**	**43**	**78**	**46**	**1.9**
Trichlorofluoromethane (CFC-11)	< 1	**0.7 J**	< 1.3	**3.9**	< 1	< 1	< 1	< 1.4	< 2.5	< 1.4	< 1
Vinyl chloride	< 1	< 1	**0.88 J**	**1.4 J**	< 1	< 1	< 1	< 1.4	< 2.5	< 1.4	< 1

Notes:
1. Summary includes compounds detected in one or more samples
2. Analysis methods SW8260.
3. See figures 2 and 3 for sample locations.
4. <: Result is below the indicated reporting limit.
   J: Estimated result.
5. Sample type codes: N - Normal

TABLE 3
FOURTH QUARTER 2015 AND FIRST QUARTER 2016 ANALYTICAL RESULTS
SURFACE WATER AND SUGAR ROCK SPRING SAMPLES
MAHLE BEHR DAYTON LLC - VANDALIA, OHIO

Location Group		Spring	
Location	F001	G004	G006
Sample Date	01/14/2016	01/14/2016	01/14/2016
Sample Type	N	N	N
Volatile Organic Compounds (ug/L)			
1,1,1-Trichloroethane	< 1	< 1	< 1 J
1,1-Dichloroethane	< 1	< 1	< 1 J
Chloroform (Trichloromethane)	**5.7**	< 1	< 1 J
cis-1,2-Dichloroethene	< 1	< 1	**1.6 J**
trans-1,2-Dichloroethene	< 1	< 1	< 1 J
Trichloroethene	< 1	< 1	**3 J**
Trichlorofluoromethane (CFC-11)	< 1	< 1	< 1 J
Vinyl chloride	< 1	< 1	< 1 J

Notes:
1. Summary includes compounds detected in one or more samples
2. Analysis methods SW8260.
3. See figures 2 and 3 for sample locations.
4. <: Result is below the indicated reporting limit.
   J: Estimated result.
5. Sample type codes: N - Normal

TABLE 4
FOURTH QUARTER 2015 & FIRST QUARTER 2016
PERFORMANCE MONITORING ANALYTICAL DATA
GROUNDWATER MIGRATION CONTROL SYSTEM
MAHLE BEHR DAYTON LLC - VANDALIA, OHIO

Compound	BRIN-100815 10/8/2015 Sugar Rock Recovery Well	OBIN-100815 10/8/2015 Overburden Recovery Well	SSIN-100815 10/8/2015 Second Sand Recovery Well	PREAS-100815 10/8/2015 Pre Air Stripper	PRECAR-100815 10/8/2015 Pre Carbon Vessels	EFF-100815 10/8/2015 Effluent
VOLATILE ORGANICS - µg/L **METHOD: EPA 624**						
1,1-Dichloroethane	< 50.0	< 500	< 200	< 100	< 1.00	< 1.00
1,1,1-Trichloroethane	< 50.0	**555**	< 200	< 100	< 1.00	< 1.00
Trichloroethene	**3050**	**16900**	**12000**	**3740**	< 1.00	< 1.00
cis-1,2-Dichloroethene	**988**	**2230**	**2450**	**1060**	< 1.00	< 1.00
pH (Lab) - S.U. (standard units) **METHOD: SM4500 H+B**				**6.86**		**8.17**

Notes and Abbreviations:
NA: Not Analyzed
< #: The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

TABLE 4
FOURTH QUARTER 2015 & FIRST QUARTER 2016
PERFORMANCE MONITORING ANALYTICAL DATA
GROUNDWATER MIGRATION CONTROL SYSTEM
MAHLE BEHR DAYTON LLC - VANDALIA, OHIO

Compound	BRIN-110515 11/5/2015 Sugar Rock Recovery Well	OBIN-110515 11/5/2015 Overburden Recovery Well	SSIN-110515 11/5/2015 Second Sand Recovery Well	PREAS-110515 11/5/2015 Pre Air Stripper	PRECAR-110515 11/5/2015 Pre Carbon Vessels	EFF-110515 11/5/2015 Effluent
VOLATILE ORGANICS - µg/L **METHOD: EPA 624**						
1,1-Dichloroethane	< 50.0	< 400	< 200	< 100	< 1.00	< 1.00
1,1,1-Trichloroethane	< 50.0	**594**	< 200	< 100	< 1.00	< 1.00
Trichloroethene	**2830**	**18800**	**9640**	**4070**	< 1.00	< 1.00
cis-1,2-Dichloroethene	**826**	**2020**	**1810**	**952**	< 1.00	< 1.00
pH (Lab) - S.U. (standard units) **METHOD: SM4500 H+B**				**7.17**		**8.35**

Notes and Abbreviations:
NA: Not Analyzed
< #: The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

TABLE 4
FOURTH QUARTER 2015 & FIRST QUARTER 2016
PERFORMANCE MONITORING ANALYTICAL DATA
GROUNDWATER MIGRATION CONTROL SYSTEM
MAHLE BEHR DAYTON LLC - VANDALIA, OHIO

Compound	BRIN-120715 12/7/2015 Sugar Rock Recovery Well	OBIN-120715 12/7/2015 Overburden Recovery Well	SSIN-120715 12/7/2015 Second Sand Recovery Well	PREAS-120715 12/7/2015 Pre Air Stripper	PRECAR-120715 12/7/2015 Pre Carbon Vessels	EFF-120715 12/7/2015 Effluent
VOLATILE ORGANICS - µg/L **METHOD: EPA 624**						
1,1-Dichloroethane	< 50.0	< 400	< 200	< 50.0	< 1.00	< 1.00
1,1,1-Trichloroethane	< 50.0	< 400	< 200	< 50.0	< 1.00	< 1.00
Trichloroethene	**2680**	**13500**	**10400**	**3460**	**2.56**	< 1.00
cis-1,2-Dichloroethene	**717**	**1200**	**1990**	**774**	**1.06**	< 1.00
pH (Lab) - S.U. (standard units) **METHOD: SM4500 H+B**				**7.15**		**8.15**

Notes and Abbreviations:
NA: Not Analyzed
< #: The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

TABLE 4
FOURTH QUARTER 2015 & FIRST QUARTER 2016
PERFORMANCE MONITORING ANALYTICAL DATA
GROUNDWATER MIGRATION CONTROL SYSTEM
MAHLE BEHR DAYTON LLC - VANDALIA, OHIO

Compound	BRIN-010616 1/6/2016 Sugar Rock Recovery Well	OBIN-010616 1/6/2016 Overburden Recovery Well	SSIN - Second Sand Recovery Well	PREAS-010616 1/6/2016 Pre Air Stripper	PRE CAR-010616 1/6/2016 Pre Carbon Vessels	EFF-010616 1/6/2016 Effluent
VOLATILE ORGANICS - µg/L **METHOD: EPA 624**						
1,1-Dichloroethane	< 50.0	< 200	-	< 100	< 1.00	< 1.00
1,1,1-Trichloroethane	< 50.0	**268**	-	< 100	< 1.00	< 1.00
Trichloroethene	**2090**	**7910**	-	**2150**	< 1.00	< 1.00
cis-1,2-Dichloroethene	**667**	**738**	-	**646**	< 1.00	< 1.00
pH (Lab) - S.U. (standard units) **METHOD: SM4500 H+B**				**7.22**		**8.50**

Notes and Abbreviations:
NA: Not Analyzed
< #: The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

TABLE 4
FOURTH QUARTER 2015 & FIRST QUARTER 2016
PERFORMANCE MONITORING ANALYTICAL DATA
GROUNDWATER MIGRATION CONTROL SYSTEM
MAHLE BEHR DAYTON LLC - VANDALIA, OHIO

Compound	BRIN-020816 2/8/2016 Sugar Rock Recovery Well	OBIN-020816 2/8/2016 Overburden Recovery Well	SSIN - Second Sand Recovery Well	PREAS-020816 2/8/2016 Pre Air Stripper	PRECAR-020816 2/8/2016 Pre Carbon Vessels	EFF-020816 2/8/2016 Effluent
VOLATILE ORGANICS - µg/L **METHOD: EPA 624**						
1,1-Dichloroethane	< 50.0	< 250	-	< 100	< 1.00	< 1.00
1,1,1-Trichloroethane	< 50.0	**420**	-	< 100	< 1.00	< 1.00
Trichloroethene	**2420**	**12400**	-	**3000**	< 1.00	< 1.00
cis-1,2-Dichloroethene	**774**	**1110**	-	**776**	< 1.00	< 1.00
pH (Lab) - S.U. (standard units) **METHOD: SM4500 H+B**				**7.20**		**8.50**

Notes and Abbreviations:
NA: Not Analyzed
< #: The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

TABLE 4
FOURTH QUARTER 2015 & FIRST QUARTER 2016
PERFORMANCE MONITORING ANALYTICAL DATA
GROUNDWATER MIGRATION CONTROL SYSTEM
MAHLE BEHR DAYTON LLC - VANDALIA, OHIO

Compound	BRIN-030416 3/4/2016 Sugar Rock Recovery Well	OBIN-030416 3/4/2016 Overburden Recovery Well	SSIN - Second Sand Recovery Well	PREAS-030416 3/4/2016 Pre Air Stripper	PRECAR-030416 3/4/2016 Pre Carbon Vessels	EFF-030416 3/4/2016 Effluent
VOLATILE ORGANICS - µg/L **METHOD: EPA 624**						
1,1-Dichloroethane	< 40.0	< 71.4	-	< 50.0	< 1.00	< 1.00
1,1,1-Trichloroethane	< 40.0	**145**	-	< 50.0	< 1.00	< 1.00
Trichloroethene	**2120**	**4320**	-	**2860**	**1.46**	**1.02**
cis-1,2-Dichloroethene	**618**	**344**	-	**552**	< 1.00	< 1.00
pH (Lab) - S.U. (standard units) **METHOD: SM4500 H+B**				**7.12**		**8.46**

Notes and Abbreviations:
NA: Not Analyzed
< #: The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

Figures

LEGEND

- MONITORING WELL SAMPLED
- ROAD
- APPROXIMATE FACILITY BOUNDARY
- BUILDING

NOTES

1. MONITORING WELL MW-806 WAS SAMPLED ON 10 FEBRUARY 2015.

N

0 1,000 2,000

SCALE IN FEET

HALEY ALDRICH

MAHLE BEHR DAYTON LLC
VANDALIA, OHIO

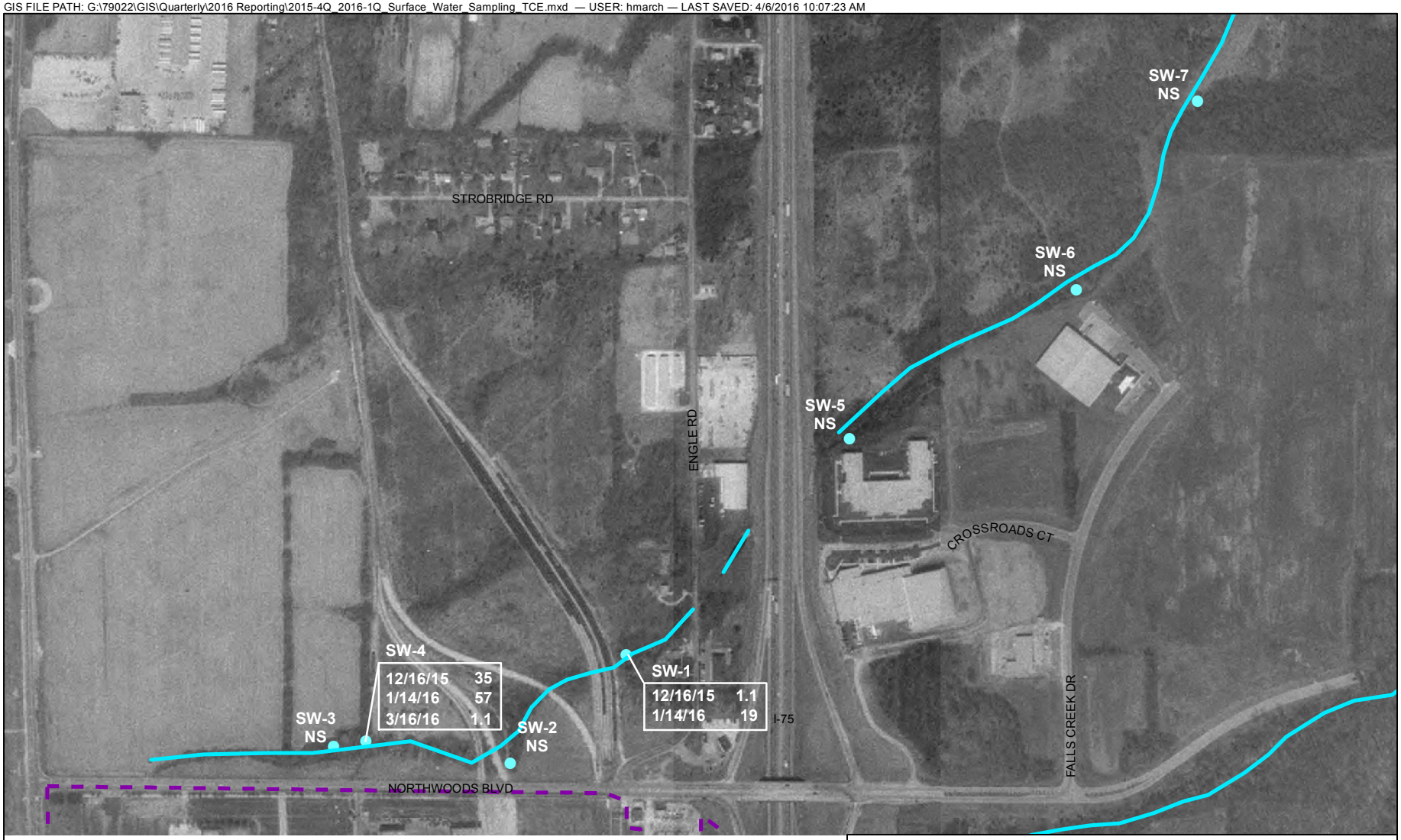
FIRST QUARTER 2016 WELLS SAMPLED

MARCH 2016

FIGURE 1

GIS FILE PATH: G:\79022\GIS\Quarterly\2016 Reporting\2016-1Q_Wells_Sampled.mxd — USER: hmarch — LAST SAVED: 3/16/2016 6:41:00 PM

GIS FILE PATH: G:\79022\GIS\Quarterly\2016 Reporting\2015-4Q_2016-1Q_Surface_Water_Sampling_TCE.mxd — USER: hmarch — LAST SAVED: 4/6/2016 10:07:23 AM



LEGEND

- APPROXIMATE FACILITY BOUNDARY
- APPROXIMATE LOCATION OF THE UNNAMED TRIBUTARY OF NORTH CREEK
- SW-1 25 — APPROXIMATE SAMPLE LOCATION WITH TCE RESULT IN ug/l
- NS — NOT SAMPLED

N

0 300 600

SCALE IN FEET

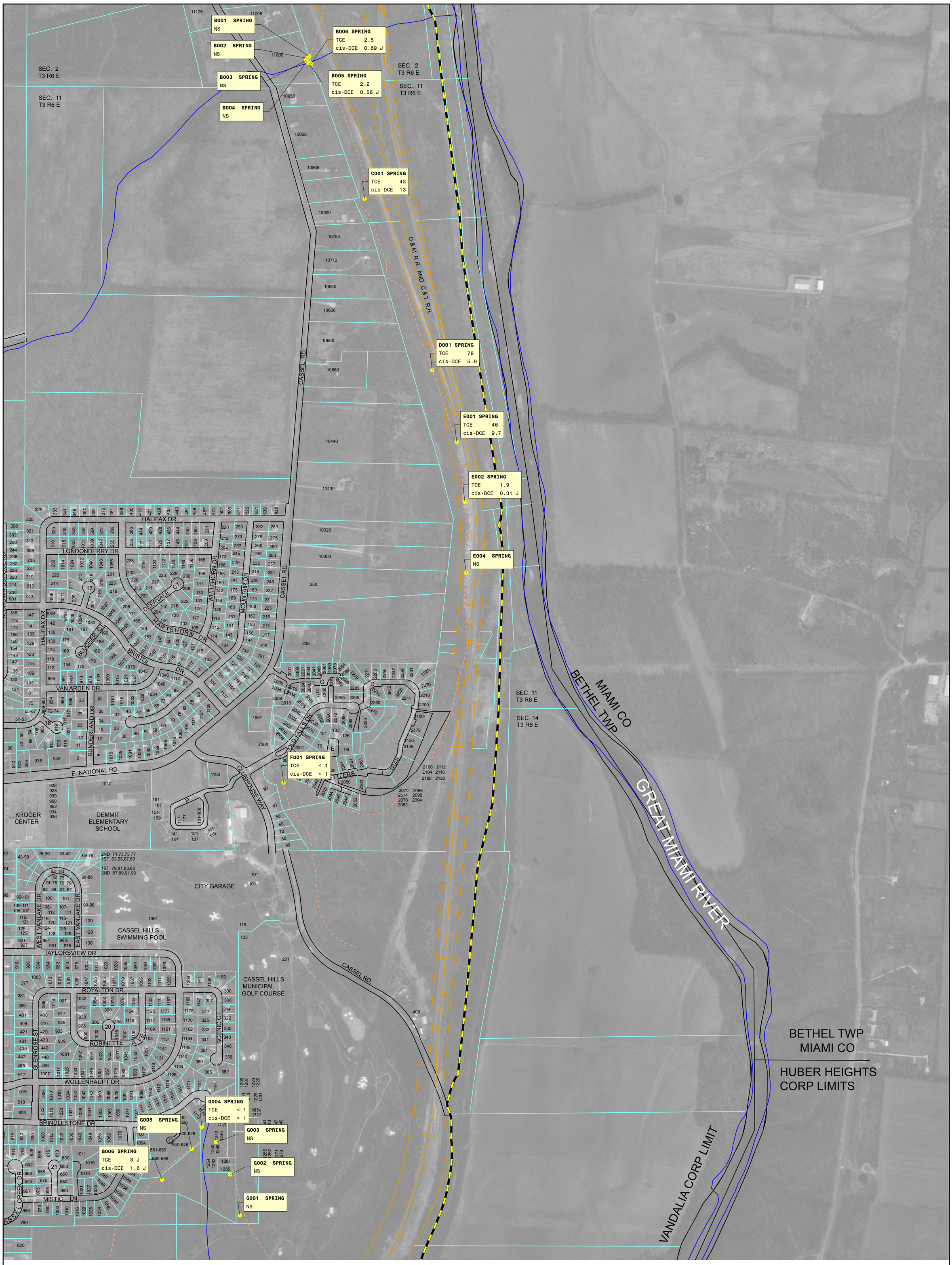
HALEY ALDRICH

MAHLE BEHR DAYTON LLC
VANDALIA, OHIO

FOURTH QUARTER 2015 & FIRST QUARTER 2016 SURFACE WATER SAMPLING LOCATIONS AND TCE RESULTS

SCALE: AS SHOWN
APRIL 2016

FIGURE 2



LEGEND

- APPROXIMATE LOCATIONS OF KNOWN SPRINGS & POOLS
- INFERRED BRASSFIELD-BELFAST OUTCROP CONTACT
- RAILROAD
- ROADWAYS
- SURFACE WATER
- NORTHERN SEGMENT OF THE GREAT MIAMI RIVER RECREATION TRAIL
- PARCEL BOUNDARY

NOTES:

1. AERIAL PHOTOGRAPH AND SURFACE FEATURES PROVIDED BY ODOT.
2. PARCEL BOUNDARIES AND ROADWAYS PROVIDED BY THE CITY OF VANDALIA.
3. LOCATIONS ARE APPROXIMATE.
4. NS - NOT SAMPLED
5. RESULTS ARE IN UG/L.
6. SPRING LOCATIONS E001, E002, AND F001 WERE DRY AT THE TIME OF SAMPLING.

N

0 400 800

SCALE FOR DETAIL IN FEET

HALEY ALDRICH

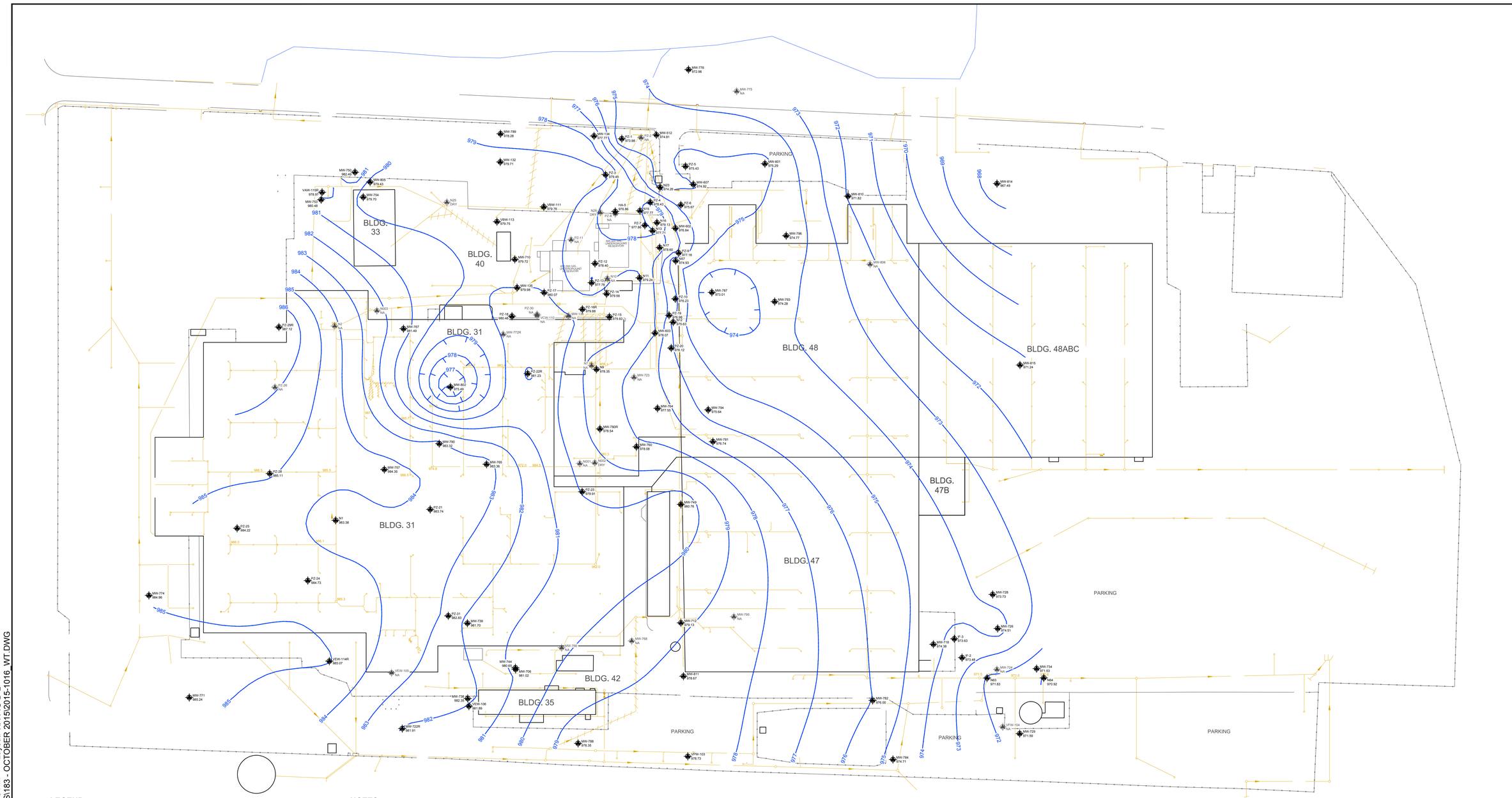
MAHLE BEHR DAYTON LLC
VANDALIA, OHIO

OUTCROP SURVEY JANUARY 2016
SPRING SAMPLE LOCATIONS
TCE & DCE RESULTS

SCALE: AS SHOWN
APRIL 2016

FIGURE 3

G:\79022\GIS\Quarterly\2016 Reporting\2016-1Q_TCE_SR_Spring.mxd



LEGEND

980	POTENTIOMETRIC SURFACE CONTOUR WITH ELEVATION IN FEET
MW-771	MONITORING WELL SCREENED IN THE SHALLOW WATER TABLE ZONE
MW-771 N/A	MOITORING WELL NOT ACCESSIBLE AT TIME OF MEASUREMENT
	STORM SEWER SYSTEM
972.0	STORM SEWER INVERT ELEVATION
	UNNAMED TRIBUTARY OF NORTH CREEK
	TUNNELS AND BASEMENTS

NOTES

1. WATER LEVELS FROM MONITORING WELLS, PIEZOMETERS, OR OTHER SOURCES USED FOR THIS PLAN WERE OBSERVED ON THE DATE INDICATED.
2. INDICATED LEVELS MAY NOT REFLECT THE ACTUAL GROUNDWATER OR POTENTIOMETRIC LEVELS. FLUCTUATIONS IN GROUNDWATER LEVELS CAN OCCUR DUE TO CLIMATIC CHANGES, AREA PUMPING ACTIVITY, AND OTHER REASONS.
3. POTENTIOMETRIC CONTOUR LINES ARE BASED UPON INTERPOLATION BETWEEN OBSERVATION POINTS AND MAY NOT ACCURATELY DEPICT THE POTENTIOMETRIC SURFACE AT ALL LOCATIONS OR TIMES.
4. WELLS THAT COULD NOT BE ACCESSED ON 16 OCTOBER 2015 AND WELLS WITH PRODUCT ARE LISTED IN APPENDIX A.

N

0 100 200 300 400

SCALE IN FEET

HALEY ALDRICH

MAHLE BEHR DAYTON LLC
VANDALIA, OHIO

POTENTIOMETRIC SURFACE CONTOURS - SHALLOW WATER TABLE ZONE - 16 OCTOBER 2015

SCALE: AS SHOWN
APRIL 2016

FIGURE 4

MARCH, HEATHER Printed: 3/30/2016 1:58 PM Layout: HA-FIG-D-L
G:\79022\WATER LEVELS\OVERBURDEN WLS\183 - OCTOBER 2015\2015-1016_WT.DWG

LEGEND

980	POTENTIOMETRIC SURFACE CONTOUR WITH ELEVATION IN FEET
MW-771	MONITORING WELL SCREENED IN THE SHALLOW WATER TABLE ZONE
MW-771 N/A	MOITORING WELL NOT ACCESSIBLE AT TIME OF MEASUREMENT
	STORM SEWER SYSTEM
972.0	STORM SEWER INVERT ELEVATION
	UNNAMED TRIBUTARY OF NORTH CREEK
	TUNNELS AND BASEMENTS

NOTES

1. WATER LEVELS FROM MONITORING WELLS, PIEZOMETERS, OR OTHER SOURCES USED FOR THIS PLAN WERE OBSERVED ON THE DATE INDICATED.
2. INDICATED LEVELS MAY NOT REFLECT THE ACTUAL GROUNDWATER OR POTENTIOMETRIC LEVELS. FLUCTUATIONS IN GROUNDWATER LEVELS CAN OCCUR DUE TO CLIMATIC CHANGES, AREA PUMPING ACTIVITY, AND OTHER REASONS.
3. POTENTIOMETRIC CONTOUR LINES ARE BASED UPON INTERPOLATION BETWEEN OBSERVATION POINTS AND MAY NOT ACCURATELY DEPICT THE POTENTIOMETRIC SURFACE AT ALL LOCATIONS OR TIMES.
4. WELLS THAT COULD NOT BE ACCESSED ON 7 JANUARY 2016 AND WELLS WITH PRODUCT ARE LISTED IN APPENDIX A.

0 100 200 300 400
SCALE IN FEET

HALEY ALDRICH

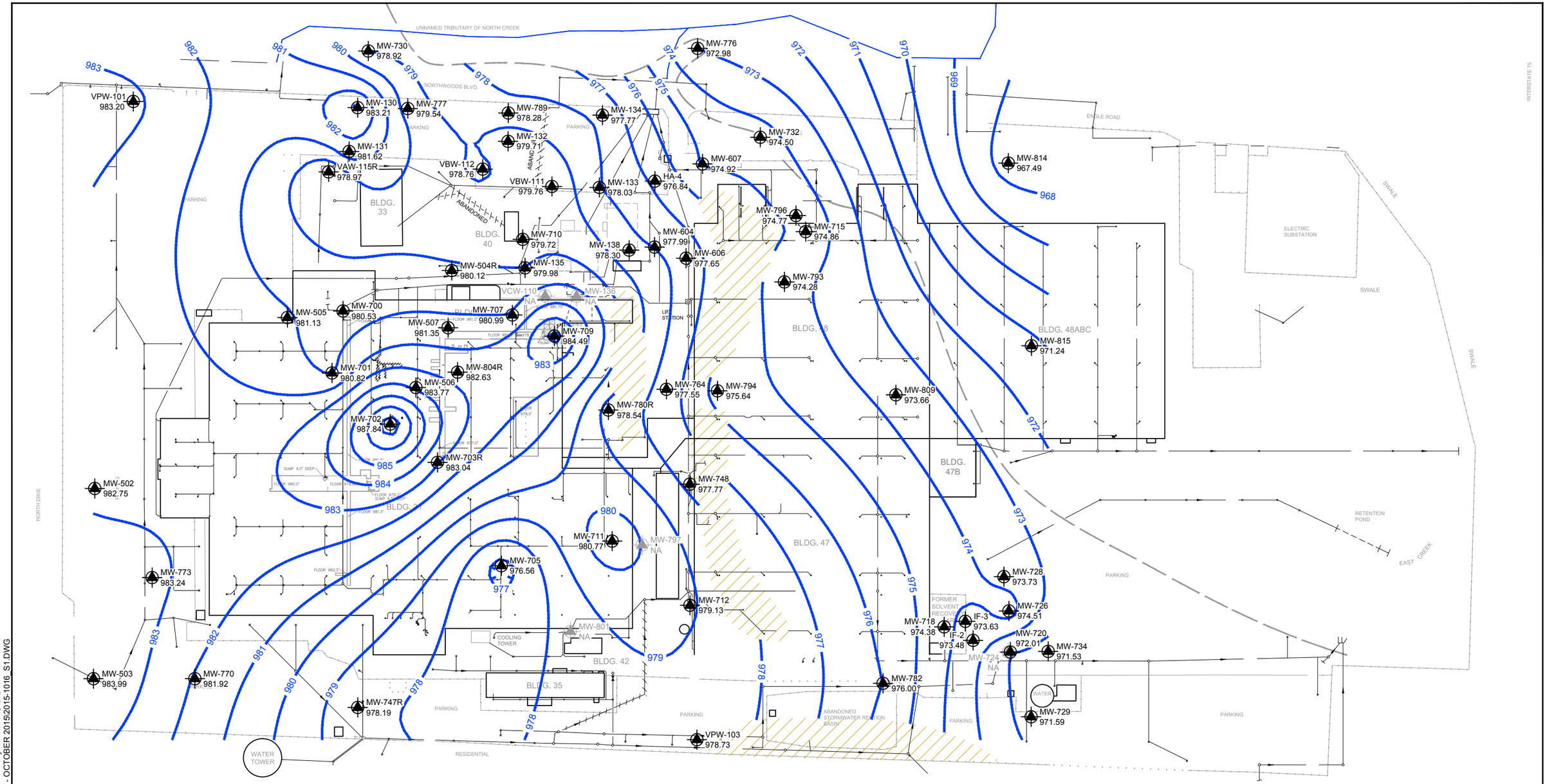
MAHLE BEHR DAYTON LLC
VANDALIA, OHIO

POTENTIOMETRIC SURFACE CONTOURS - SHALLOW WATER TABLE ZONE - 7 JANUARY 2016

SCALE: AS SHOWN
APRIL 2016

FIGURE 5

MARCH, HEATHER Printed: 3/30/2016 1:58 PM Layout: HA-FIG-D-L
G:\79022\WATER LEVELS\OVERBURDEN WLS\186 - JANUARY 2016\2016-0107_WT.DWG



LEGEND

MW-770 984.34 — MONITORING WELL SCREENED IN THE FIRST SAND WITH GROUNDWATER ELEVATION

980 — POTENTIOMETRIC SURFACE CONTOUR WITH ELEVATION IN FEET

AREA DETERMINED AS NOT HAVING THE FIRST SAND UNIT (FIRST SAND UNIT MAY NOT BE PRESENT IN OTHER UNDETERMINED AREAS)

AREA DETERMINED AS HAVING THE FIRST SAND UNIT REPLACED BY FILL DURING SEWER CONSTRUCTION

UNNAMED TRIBUTARY OF NORTH CREEK

APPROXIMATE LOCATION OF INTERPRETED FIRST SAND MERGE WITH SECOND SAND

NOTES

1. WATER LEVELS FROM MONITORING WELLS, PIEZOMETERS OR OTHER SOURCES USED FOR THIS PLAN WERE OBSERVED ON THE DATE INDICATED.
2. INDICATED LEVELS MAY NOT REFLECT THE ACTUAL GROUNDWATER OR POTENTIOMETRIC LEVELS. FLUCTUATIONS IN GROUNDWATER LEVELS CAN OCCUR DUE TO CLIMATIC CHANGES, AREA PUMPING ACTIVITY AND OTHER REASONS.
3. POTENTIOMETRIC CONTOUR LINES ARE BASED UPON INTERPOLATION BETWEEN OBSERVATION POINTS AND MAY NOT ACCURATELY DEPICT THE POTENTIOMETRIC SURFACE AT ALL LOCATIONS OR TIMES.
4. WELLS THAT COULD NOT BE ACCESSED ON 16 OCTOBER 2015 AND WELLS WITH PRODUCT ARE LISTED IN APPENDIX A.

N

0 200 400

SCALE IN FEET

HALEY ALDRICH

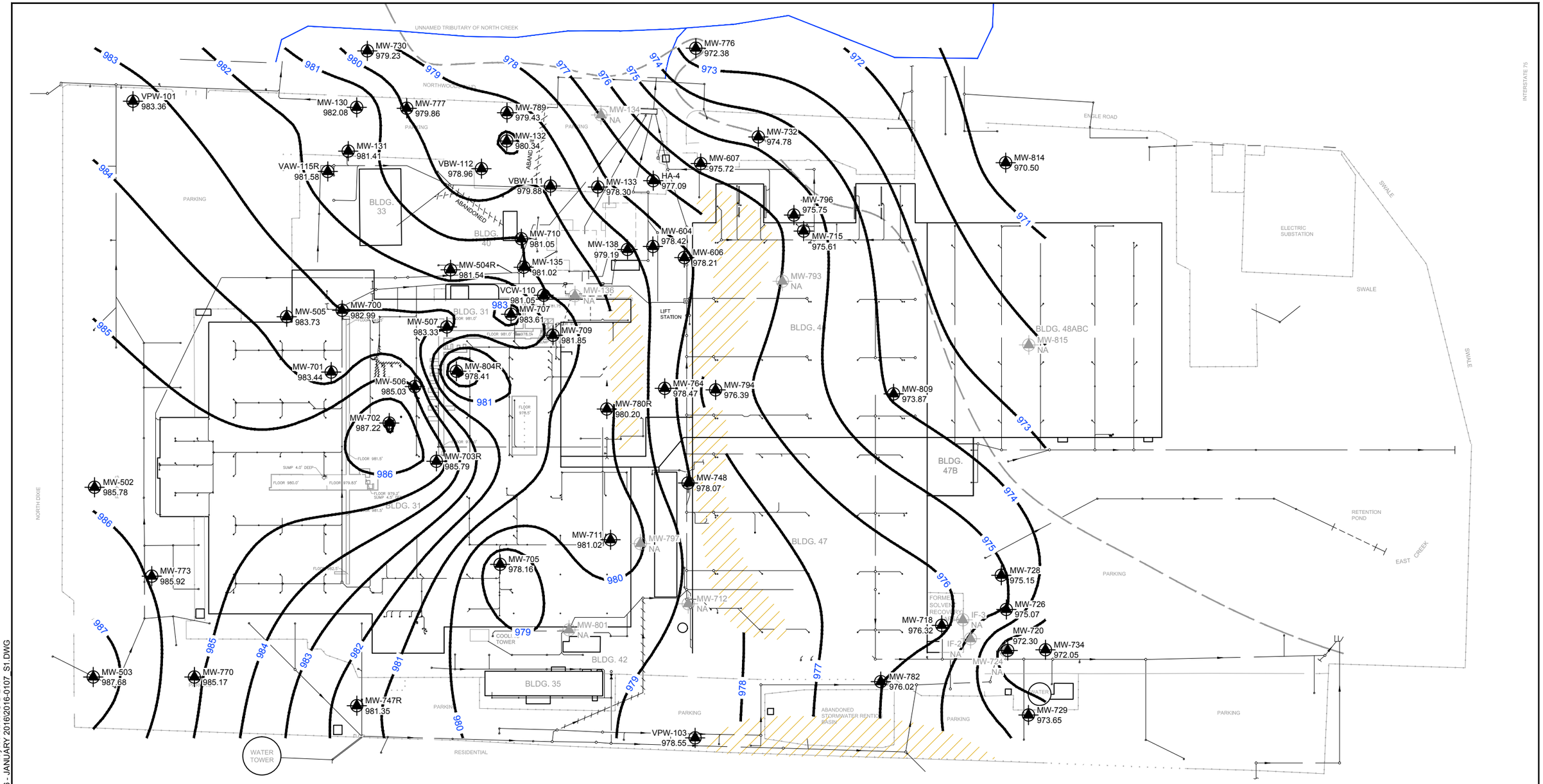
MAHLE BEHR DAYTON LLC
VANDALIA, OHIO

POTENTIOMETRIC SURFACE CONTOURS - 16 OCTOBER 2015 FIRST SAND ZONE

SCALE: AS SHOWN
APRIL 2016

FIGURE 6

MARCH, HEATHER Printed:3/9/2016 2:52 PM Layout: HA-FIG-B-L-H
G:\79022\WATER LEVELS\OVERBURDEN WLS\183 - OCTOBER 2015\2015-1016_S1.DWG



LEGEND

- MW-770 984.34 — MONITORING WELL SCREENED IN THE FIRST SAND WITH GROUNDWATER ELEVATION
- 980 — POTENTIOMETRIC SURFACE CONTOUR WITH ELEVATION IN FEET
- AREA DETERMINED AS NOT HAVING THE FIRST SAND UNIT (FIRST SAND UNIT MAY NOT BE PRESENT IN OTHER UNDETERMINED AREAS)
- AREA DETERMINED AS HAVING THE FIRST SAND UNIT REPLACED BY FILL DURING SEWER CONSTRUCTION
- UNNAMED TRIBUTARY OF NORTH CREEK
- APPROXIMATE LOCATION OF INTERPRETED FIRST SAND MERGE WITH SECOND SAND

NOTES

1. WATER LEVELS FROM MONITORING WELLS, PIEZOMETERS OR OTHER SOURCES USED FOR THIS PLAN WERE OBSERVED ON THE DATE INDICATED.
2. INDICATED LEVELS MAY NOT REFLECT THE ACTUAL GROUNDWATER OR POTENTIOMETRIC LEVELS. FLUCTUATIONS IN GROUNDWATER LEVELS CAN OCCUR DUE TO CLIMATIC CHANGES, AREA PUMPING ACTIVITY AND OTHER REASONS.
3. POTENTIOMETRIC CONTOUR LINES ARE BASED UPON INTERPOLATION BETWEEN OBSERVATION POINTS AND MAY NOT ACCURATELY DEPICT THE POTENTIOMETRIC SURFACE AT ALL LOCATIONS OR TIMES.
4. WELLS THAT COULD NOT BE ACCESSED ON 7 JANUARY 2016 AND WELLS WITH PRODUCT ARE LISTED IN APPENDIX A.

N

0 200 400
SCALE IN FEET

HALEY ALDRICH

MAHLE BEHR DAYTON LLC
VANDALIA, OHIO

POTENTIOMETRIC SURFACE CONTOURS - 7 JANUARY 2016 FIRST SAND ZONE

SCALE: AS SHOWN
APRIL 2016

FIGURE 7

MARCH_HEATHER Printed:3/9/2016 2:50 PM Layout: HA-FIG-B-L-H
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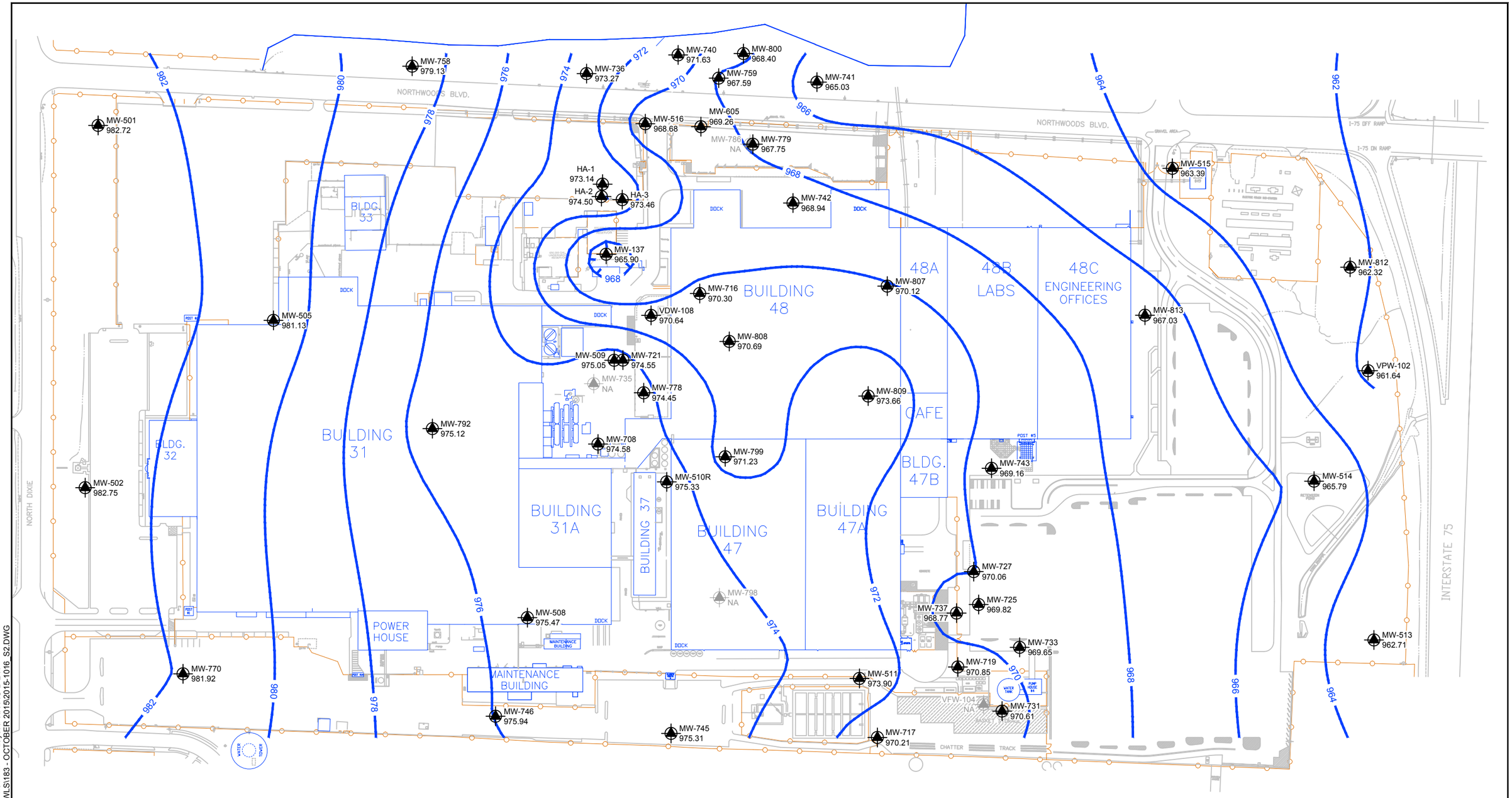


LEGEND

MW701 981.30	MONITORING WELL OR PIEZOMETER WITH GROUNDWATER ELEVATION
980	POTENTIOMETRIC SURFACE CONTOUR WITH ELEVATION IN FEET
	UNNAMED TRIBUTARY OF NORTH CREEK
NA	MONITORING WELL NOT ACCESSIBLE DUE TO ACCESS RESTRICTIONS

NOTES

1. WATER LEVELS FROM MONITORING WELLS, PIEZOMETERS OR OTHER SOURCES USED FOR THIS PLAN WERE OBSERVED ON THE DATE INDICATED.
2. INDICATED LEVELS MAY NOT REFLECT THE ACTUAL GROUNDWATER OR POTENTIOMETRIC LEVELS. FLUCTUATIONS IN GROUNDWATER LEVELS CAN OCCUR DUE TO CLIMATIC CHANGES, AREA PUMPING AND OTHER REASONS.
3. POTENTIOMETRIC CONTOUR LINES ARE BASED UPON INTERPOLATION BETWEEN OBSERVED POINTS AND MAY NOT ACCURATELY DEPICT THE POTENTIOMETRIC SURFACE AT ALL LOCATIONS OR TIMES.
4. WELLS THAT COULD NOT BE ACCESSED ON 16 OCTOBER 2015 AND WELLS WITH PRODUCT ARE LISTED IN APPENDIX A.

N

0 200 400
SCALE IN FEET

HALEY ALDRICH

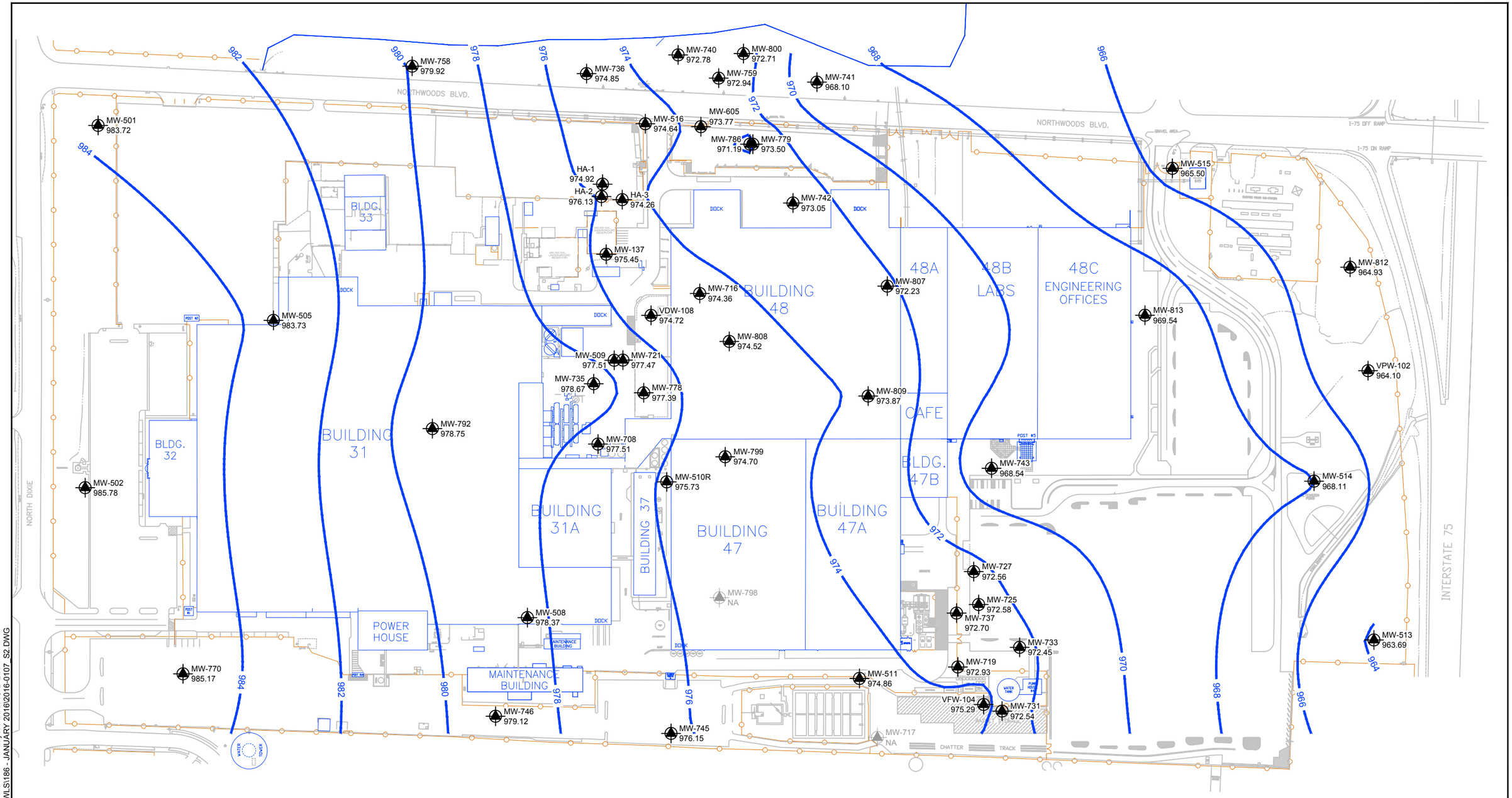
MAHLE BEHR DAYTON LLC
VANDALIA, OHIO

POTENTIOMETRIC SURFACE CONTOURS - 16 OCTOBER 2015 SECOND SAND ZONE

SCALE: AS SHOWN
APRIL 2016

FIGURE 8

MARCH, HEATHER Printed:3/30/2016 1:54 PM Layout: HA-FIG-B-L-H
G:\79022\WATER LEVELS\OVERBURDEN WLS\183 - OCTOBER 2015\2015-1016_S2.DWG



LEGEND

- MW701 981.30 — MONITORING WELL OR PIEZOMETER WITH GROUNDWATER ELEVATION
- 980 — POTENTIOMETRIC SURFACE CONTOUR WITH ELEVATION IN FEET
- UNNAMED TRIBUTARY OF NORTH CREEK
- NA — MONITORING WELL NOT ACCESSIBLE DUE TO ACCESS RESTRICTIONS

NOTES

1. WATER LEVELS FROM MONITORING WELLS, PIEZOMETERS OR OTHER SOURCES USED FOR THIS PLAN WERE OBSERVED ON THE DATE INDICATED.
2. INDICATED LEVELS MAY NOT REFLECT THE ACTUAL GROUNDWATER OR POTENTIOMETRIC LEVELS. FLUCTUATIONS IN GROUNDWATER LEVELS CAN OCCUR DUE TO CLIMATIC CHANGES, AREA PUMPING AND OTHER REASONS.
3. POTENTIOMETRIC CONTOUR LINES ARE BASED UPON INTERPOLATION BETWEEN OBSERVED POINTS AND MAY NOT ACCURATELY DEPICT THE POTENTIOMETRIC SURFACE AT ALL LOCATIONS OR TIMES.
4. WELLS THAT COULD NOT BE ACCESSED ON 7 JANUARY 2016 AND WELLS WITH PRODUCT ARE LISTED IN APPENDIX A.

N

0 200 400
SCALE IN FEET

HALEY ALDRICH

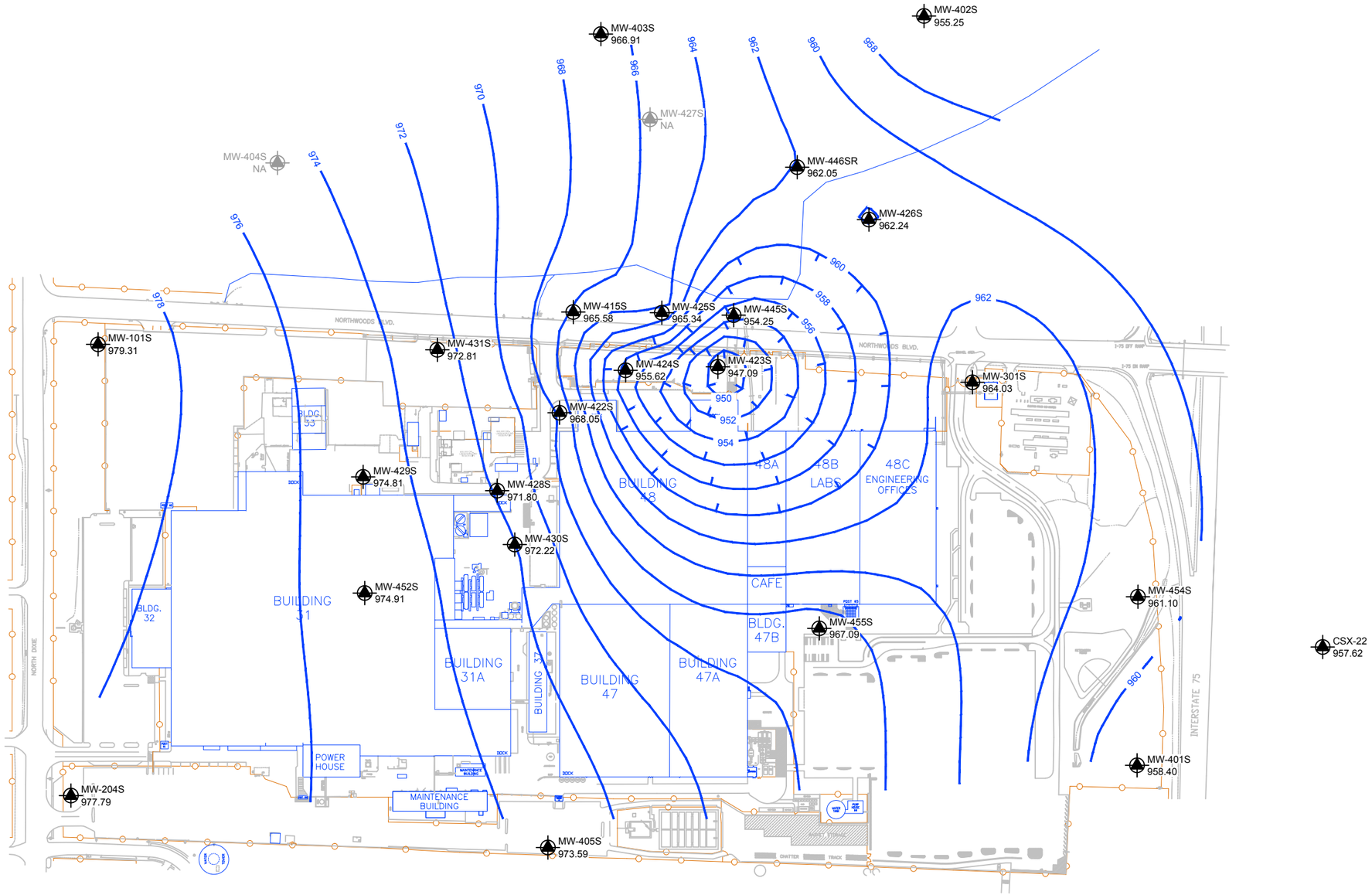
MAHLE BEHR DAYTON LLC
VANDALIA, OHIO

POTENTIOMETRIC SURFACE CONTOURS - 7 JANUARY 2016 SECOND SAND ZONE

SCALE: AS SHOWN
APRIL 2016

FIGURE 9

MARCH, HEATHER Printed:3/30/2016 1:54 PM Layout: HA-FIG-B-L-H
G:\79022\WATER LEVELS\OVERBURDEN WLS\186 - JANUARY 2016\2016-0107_S2.DWG



LEGEND

MW-204S 979.24	MONITORING WELL OR PIEZOMETER WITH GROUNDWATER ELEVATION
980	POTENTIOMETRIC SURFACE CONTOUR WITH ELEVATION IN FEET
	UNNAMED TRIBUTARY OF NORTH CREEK
NA	MONITORING WELL NOT ACCESSIBLE DUE TO ACCESS RESTRICTIONS

NOTES

1. WATER LEVELS FROM MONITORING WELLS, PIEZOMETERS OR OTHER SOURCES USED FOR THIS PLAN WERE OBSERVED ON THE DATE INDICATED.
2. INDICATED LEVELS MAY NOT REFLECT THE ACTUAL GROUNDWATER OR POTENTIOMETRIC LEVELS. FLUCTUATIONS IN GROUNDWATER LEVELS CAN OCCUR DUE TO CLIMATIC CHANGES, AREA PUMPING ACTIVITY AND OTHER REASONS.
3. POTENTIOMETRIC CONTOUR LINES ARE BASED UPON INTERPOLATION BETWEEN OBSERVATION POINTS AND MAY NOT ACCURATELY DEPICT THE POTENTIOMETRIC SURFACE AT ALL LOCATIONS OR TIMES.
4. MW-404S AND MW-427S WERE NOT GAUGED AND THEREFORE EXCLUDED FROM THE POTENTIOMETRIC SURFACE.

N

0 300 600

SCALE IN FEET

HALEY ALDRICH

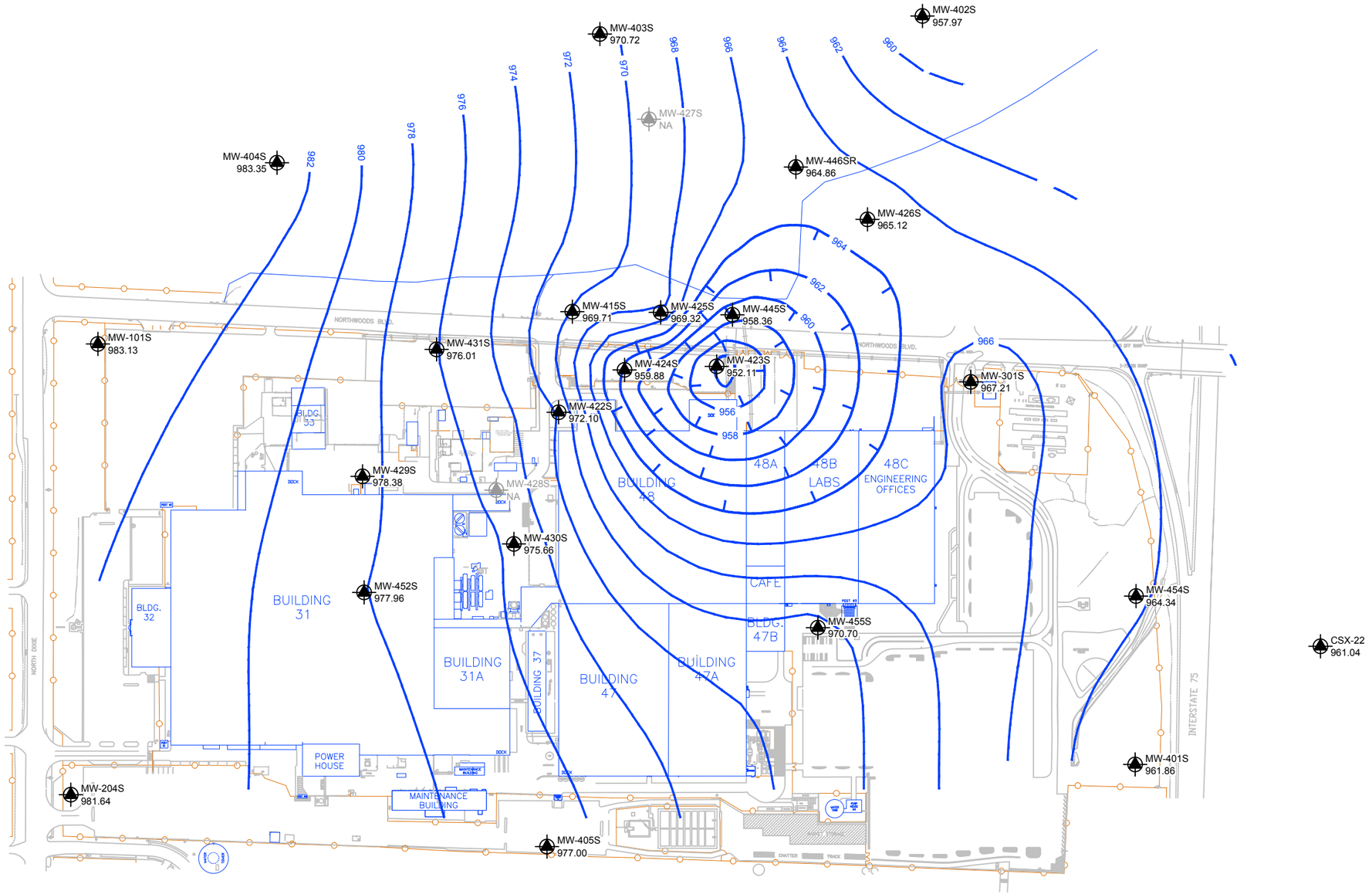
MAHLE BEHR DAYTON LLC
VANDALIA, OHIO

POTENTIOMETRIC SURFACE CONTOURS - 14 OCTOBER 2015 TOP OF ROCK ZONE

SCALE: AS SHOWN
APRIL 2016

FIGURE 10

MARCH, HEATHER Printed: 3/30/2016 1:41 PM Layout: HA-FIG-B-L-H
G:\79022\WATER LEVELS\BEDROCK\WLS\188 - OCTOBER 2015\2015-1014_TOR_CONTOURS.DWG



LEGEND

MW-204S 979.24 — MONITORING WELL OR PIEZOMETER WITH GROUNDWATER ELEVATION

980 — POTENTIOMETRIC SURFACE CONTOUR WITH ELEVATION IN FEET

UNNAMED TRIBUTARY OF NORTH CREEK

NA — MONITORING WELL NOT ACCESSIBLE DUE TO ACCESS RESTRICTIONS

NOTES

1. WATER LEVELS FROM MONITORING WELLS, PIEZOMETERS OR OTHER SOURCES USED FOR THIS PLAN WERE OBSERVED ON THE DATE INDICATED.
2. INDICATED LEVELS MAY NOT REFLECT THE ACTUAL GROUNDWATER OR POTENTIOMETRIC LEVELS. FLUCTUATIONS IN GROUNDWATER LEVELS CAN OCCUR DUE TO CLIMATIC CHANGES, AREA PUMPING ACTIVITY AND OTHER REASONS.
3. POTENTIOMETRIC CONTOUR LINES ARE BASED UPON INTERPOLATION BETWEEN OBSERVATION POINTS AND MAY NOT ACCURATELY DEPICT THE POTENTIOMETRIC SURFACE AT ALL LOCATIONS OR TIMES.
4. MW-428S AND MW-427S WERE NOT GAUGED AND THEREFORE EXCLUDED FROM THE POTENTIOMETRIC SURFACE.

N

0 300 600

SCALE IN FEET

HALEY ALDRICH

MAHLE BEHR DAYTON LLC
VANDALIA, OHIO

POTENTIOMETRIC SURFACE CONTOURS - 15 JANUARY 2016 TOP OF ROCK ZONE

SCALE: AS SHOWN
APRIL 2016

FIGURE 11

MARCH, HEATHER Printed:3/30/2016 1:46 PM Layout: HA-FIG-B-L-H
G:\79022\WATER LEVELS\BEDROCK WLS\191 - JANUARY 2016\2016-0115_TOR_CONTOURS.DWG

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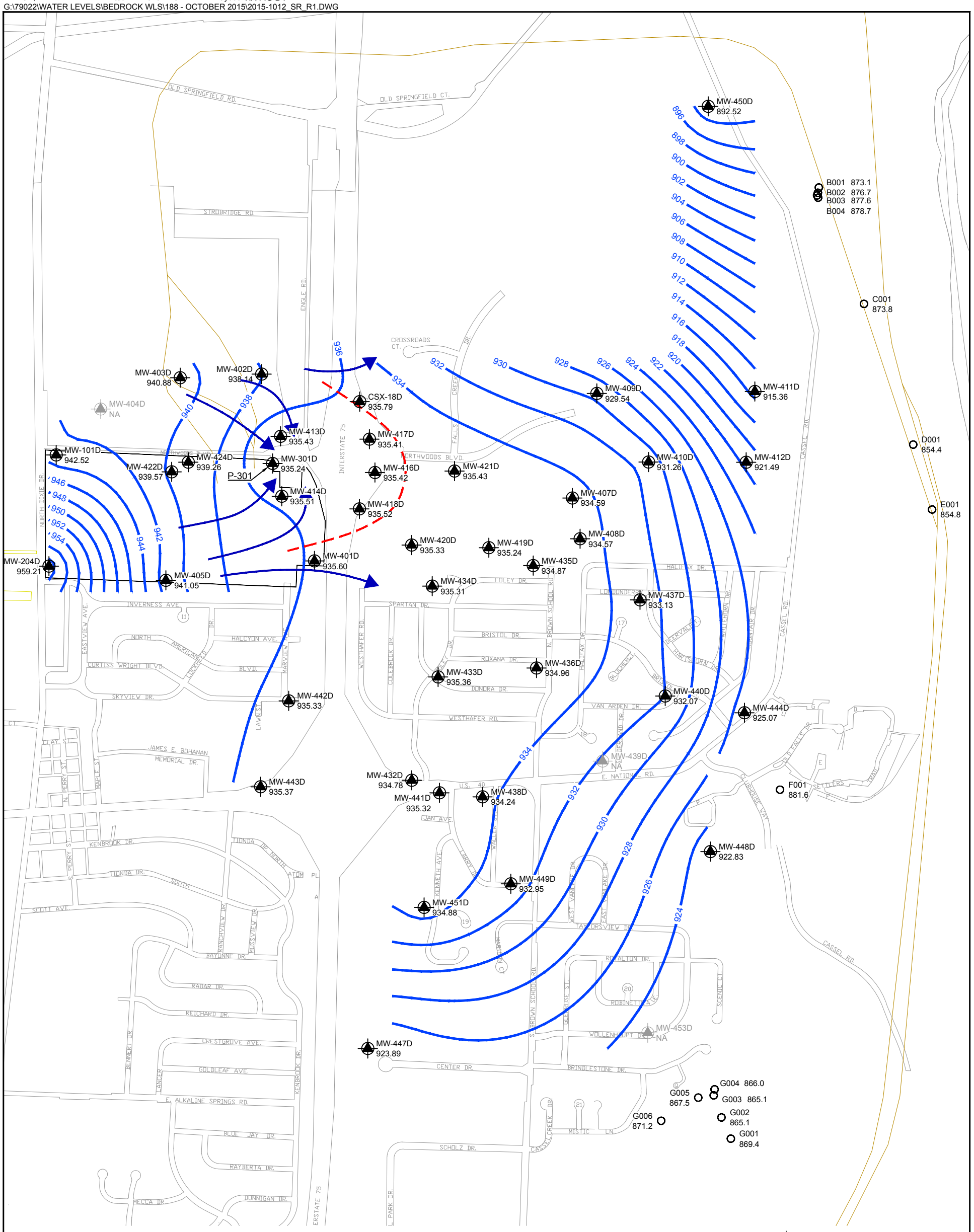

LEGEND

- FACILITY BOUNDARY
- MONITORING WELL
- SPRING LOCATION
- POTENTIOMETRIC SURFACE CONTOUR
- EASTERN LIMITS OF APPARENT CAPTURE ZONE

NOTES

1. WATER LEVELS FROM MONITORING WELLS, PIEZOMETERS OR OTHER SOURCES USED FOR THIS PLAN WERE OBSERVED ON THE DATE INDICATED.
2. INDICATED LEVELS MAY NOT REFLECT THE ACTUAL GROUNDWATER OR POTENTIOMETRIC LEVELS. FLUCTUATIONS IN GROUNDWATER LEVELS CAN OCCUR DUE TO CLIMACTIC CHANGES, AREA PUMPING ACTIVITY AND OTHER REASONS.
3. POTENTIOMETRIC CONTOUR LINES ARE BASED UPON INTERPOLATION BETWEEN OBSERVATION POINTS AND MAY NOT ACCURATELY DEPICT THE POTENTIOMETRIC SURFACE AT ALL TIMES.
4. WELLS THAT COULD NOT BE ACCESSED ARE LISTED IN APPENDIX A.

HALEY ALDRICH

MAHLE BEHR DAYTON LLC
VANDALIA, OHIO

DEEP BEDROCK (SUGAR ROCK/BELFAST TRANSITION ZONE) POTENTIOMETRIC SURFACE CONTOURS - 12 OCTOBER 2015

SCALE: AS SHOWN
APRIL 2016

FIGURE 12

MARCH, HEATHER Printed: 4/4/2016 11:51 AM Layout: HA-FIG-B-P
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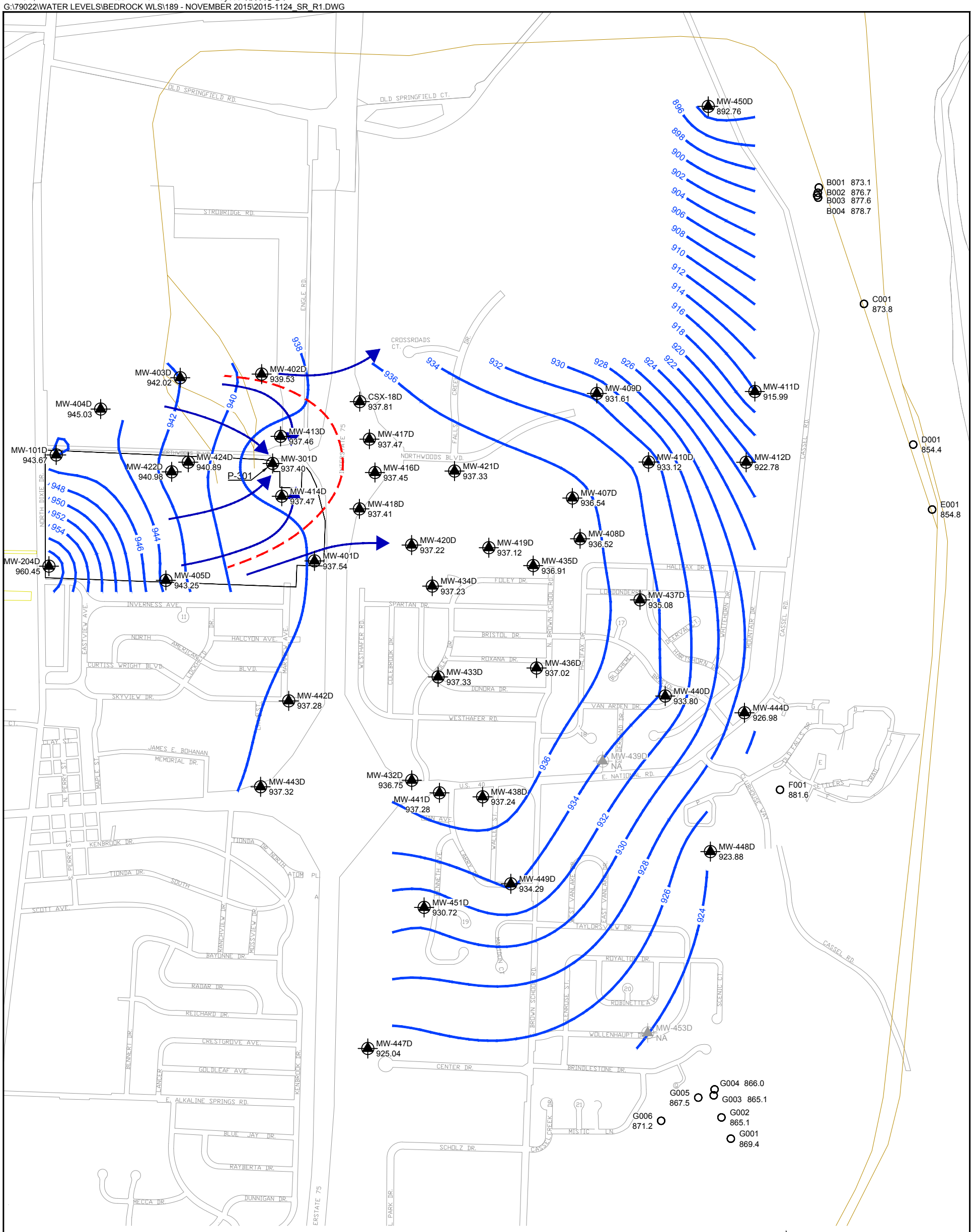

0 1000 2000
SCALE IN FEET

LEGEND

- FACILITY BOUNDARY
- MONITORING WELL
- SPRING LOCATION
- POTENTIOMETRIC SURFACE CONTOUR
- EASTERN LIMITS OF APPARENT CAPTURE ZONE

NOTES

1. WATER LEVELS FROM MONITORING WELLS, PIEZOMETERS OR OTHER SOURCES USED FOR THIS PLAN WERE OBSERVED ON THE DATE INDICATED.
2. INDICATED LEVELS MAY NOT REFLECT THE ACTUAL GROUNDWATER OR POTENTIOMETRIC LEVELS. FLUCTUATIONS IN GROUNDWATER LEVELS CAN OCCUR DUE TO CLIMACTIC CHANGES, AREA PUMPING ACTIVITY AND OTHER REASONS.
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4. WELLS THAT COULD NOT BE ACCESSED ARE LISTED IN APPENDIX A.

HALEY ALDRICH

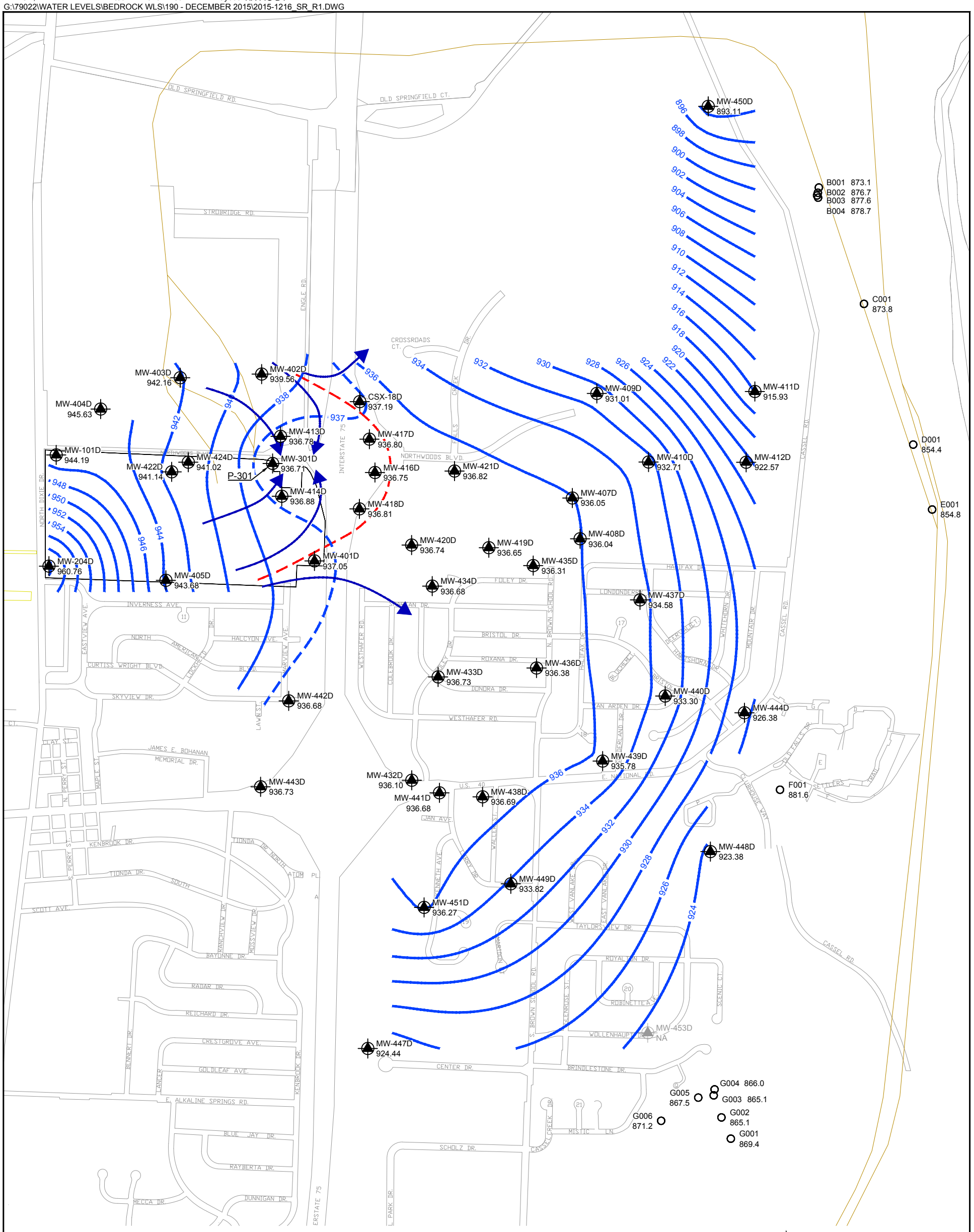
MAHLE BEHR DAYTON LLC
VANDALIA, OHIO

DEEP BEDROCK (SUGAR ROCK/BELFAST TRANSITION ZONE) POTENTIOMETRIC SURFACE CONTOURS - 24 NOVEMBER 2015

SCALE: AS SHOWN
APRIL 2016

FIGURE 13

MARCH, HEATHER Printed: 4/4/2016 12:09 PM Layout: HA-FIG-B-P
G:\79022\WATER LEVELS\BEDROCK WLS\190 - DECEMBER 2015\2015-1216_SR_R1.DWG



LEGEND

- FACILITY BOUNDARY
- MONITORING WELL
- SPRING LOCATION
- POTENTIOMETRIC SURFACE CONTOUR
- EASTERN LIMITS OF APPARENT CAPTURE ZONE

NOTES

1. WATER LEVELS FROM MONITORING WELLS, PIEZOMETERS OR OTHER SOURCES USED FOR THIS PLAN WERE OBSERVED ON THE DATE INDICATED.
2. INDICATED LEVELS MAY NOT REFLECT THE ACTUAL GROUNDWATER OR POTENTIOMETRIC LEVELS. FLUCTUATIONS IN GROUNDWATER LEVELS CAN OCCUR DUE TO CLIMACTIC CHANGES, AREA PUMPING ACTIVITY AND OTHER REASONS.
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4. WELLS THAT COULD NOT BE ACCESSED ARE LISTED IN APPENDIX A.

HALEY ALDRICH

MAHLE BEHR DAYTON LLC
VANDALIA, OHIO

DEEP BEDROCK (SUGAR ROCK/BELFAST TRANSITION ZONE) POTENTIOMETRIC SURFACE CONTOURS - 16 DECEMBER 2015

SCALE: AS SHOWN
APRIL 2016

FIGURE 14

MARCH, HEATHER Printed: 4/4/2016 12:23 PM Layout: HA-FIG-B-P
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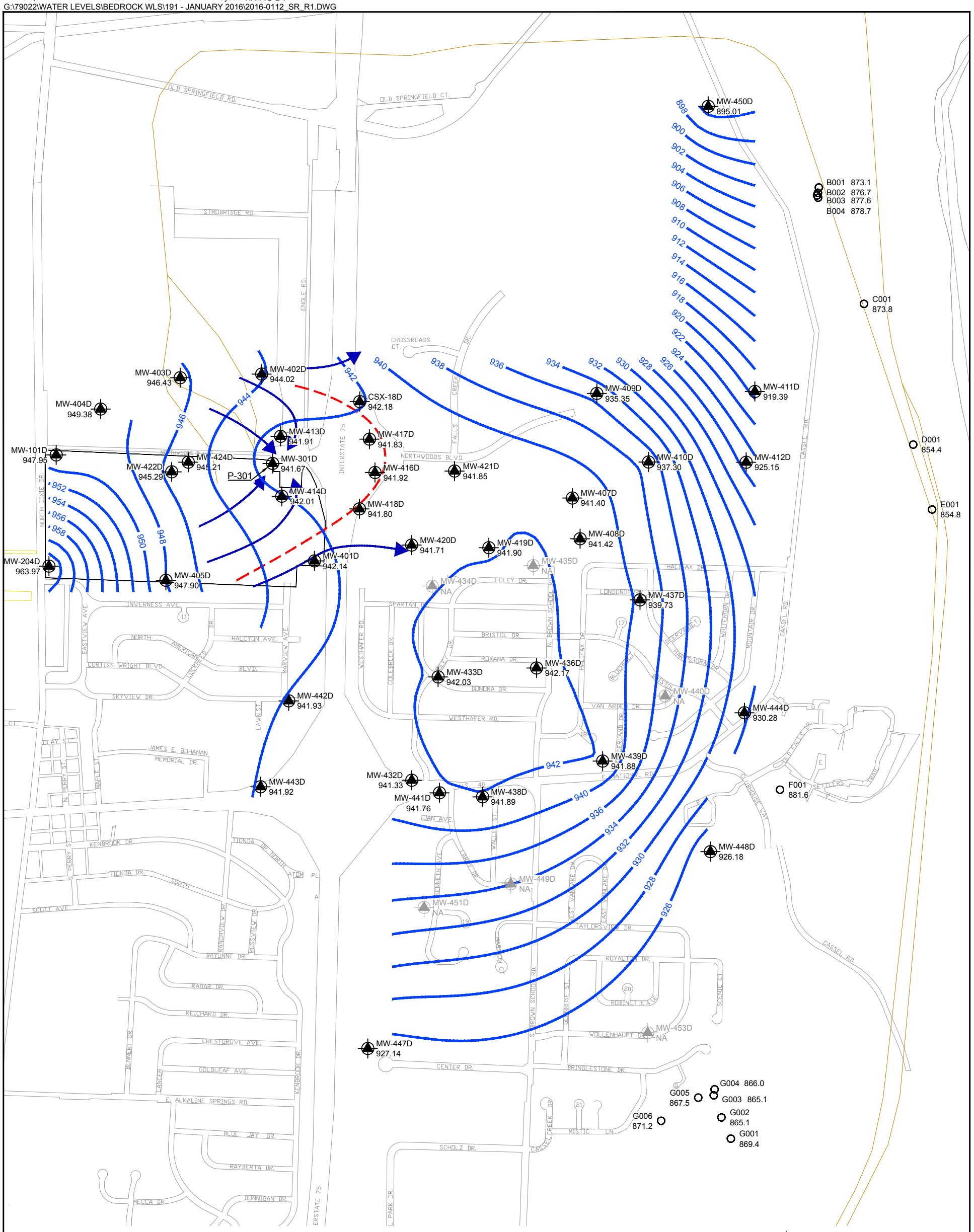


LEGEND

- FACILITY BOUNDARY
- MONITORING WELL
- SPRING LOCATION
- POTENTIOMETRIC SURFACE CONTOUR
- EASTERN LIMITS OF APPARENT CAPTURE ZONE

NOTES

1. WATER LEVELS FROM MONITORING WELLS, PIEZOMETERS OR OTHER SOURCES USED FOR THIS PLAN WERE OBSERVED ON THE DATE INDICATED.
2. INDICATED LEVELS MAY NOT REFLECT THE ACTUAL GROUNDWATER OR POTENTIOMETRIC LEVELS. FLUCTUATIONS IN GROUNDWATER LEVELS CAN OCCUR DUE TO CLIMACTIC CHANGES, AREA PUMPING ACTIVITY AND OTHER REASONS.
3. POTENTIOMETRIC CONTOUR LINES ARE BASED UPON INTERPOLATION BETWEEN OBSERVATION POINTS AND MAY NOT ACCURATELY DEPICT THE POTENTIOMETRIC SURFACE AT ALL TIMES.
4. WELLS THAT COULD NOT BE ACCESSED ARE LISTED IN APPENDIX A.

HALEY ALDRICH

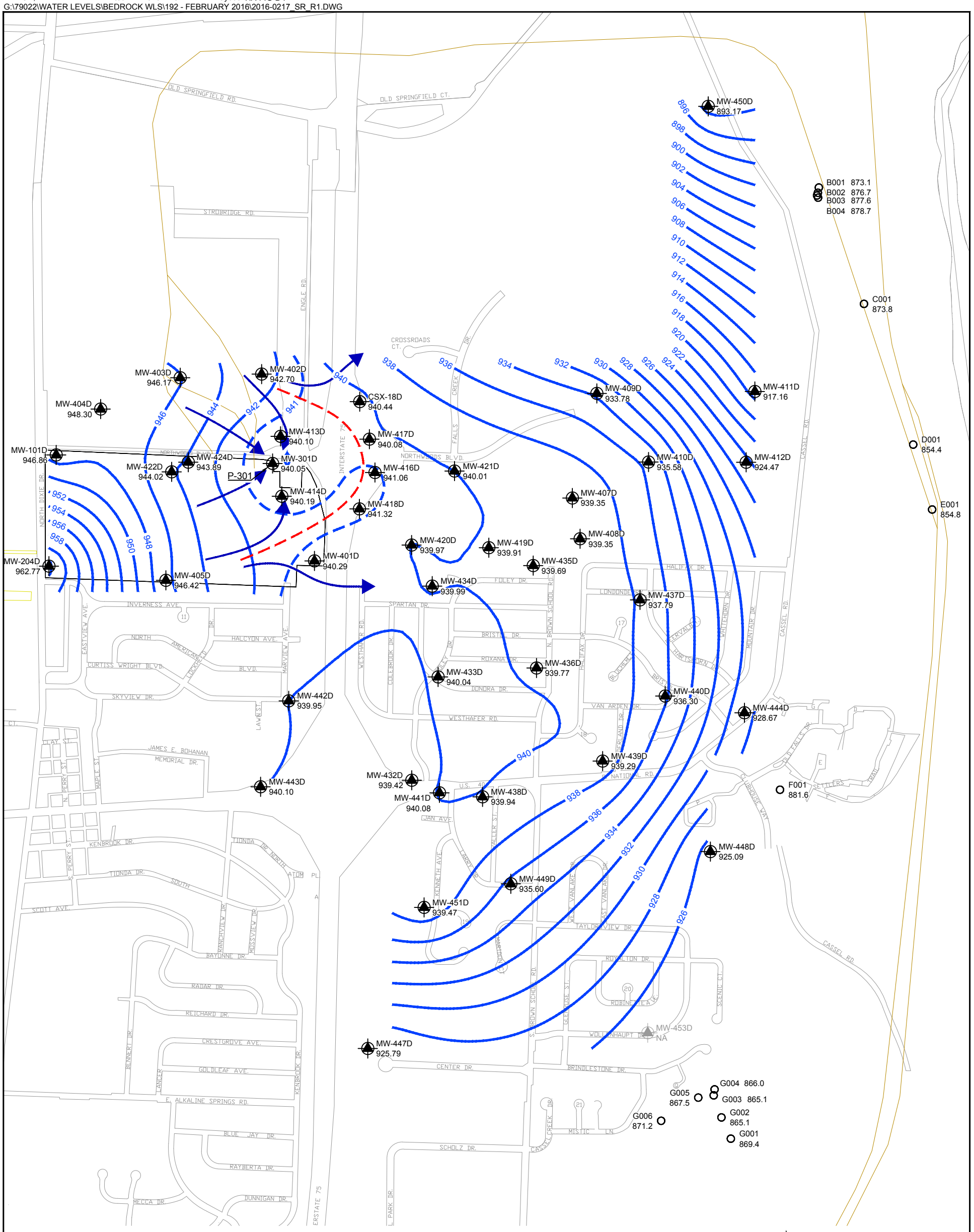
MAHLE BEHR DAYTON LLC
VANDALIA, OHIO

DEEP BEDROCK (SUGAR ROCK/BELFAST TRANSITION ZONE) POTENTIOMETRIC SURFACE CONTOURS - 12 JANUARY 2016

SCALE: AS SHOWN
APRIL 2016

FIGURE 15

MARCH, HEATHER Printed: 4/4/2016 12:57 PM Layout: HA-FIG-B-P
G:\79022\WATER LEVELS\BEDROCK WLS\192 - FEBRUARY 2016\2016-0217_SR_R1.DWG



LEGEND

- FACILITY BOUNDARY
- MONITORING WELL
- SPRING LOCATION
- POTENTIOMETRIC SURFACE CONTOUR
- EASTERN LIMITS OF APPARENT CAPTURE ZONE

NOTES

1. WATER LEVELS FROM MONITORING WELLS, PIEZOMETERS OR OTHER SOURCES USED FOR THIS PLAN WERE OBSERVED ON THE DATE INDICATED.
2. INDICATED LEVELS MAY NOT REFLECT THE ACTUAL GROUNDWATER OR POTENTIOMETRIC LEVELS. FLUCTUATIONS IN GROUNDWATER LEVELS CAN OCCUR DUE TO CLIMACTIC CHANGES, AREA PUMPING ACTIVITY AND OTHER REASONS.
3. POTENTIOMETRIC CONTOUR LINES ARE BASED UPON INTERPOLATION BETWEEN OBSERVATION POINTS AND MAY NOT ACCURATELY DEPICT THE POTENTIOMETRIC SURFACE AT ALL TIMES.
4. WELLS THAT COULD NOT BE ACCESSED ARE LISTED IN APPENDIX A.

HALEY ALDRICH

MAHLE BEHR DAYTON LLC
VANDALIA, OHIO

DEEP BEDROCK (SUGAR ROCK/BELFAST TRANSITION ZONE) POTENTIOMETRIC SURFACE CONTOURS - 17 FEBRUARY 2016

SCALE: AS SHOWN
APRIL 2016

FIGURE 16

MARCH, HEATHER Printed: 4/4/2016 1:14 PM Layout: HA-FIG-B-P
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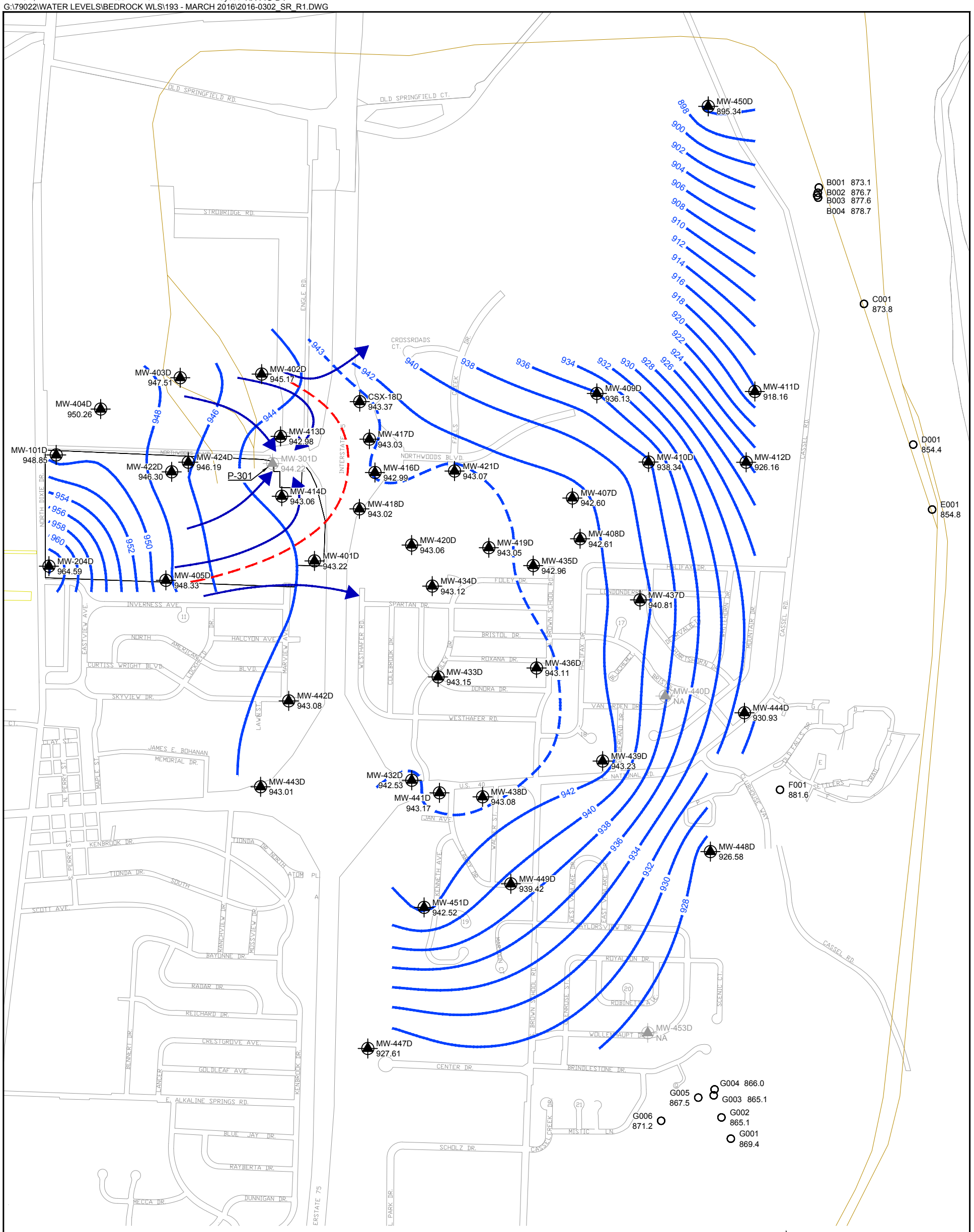

LEGEND

- FACILITY BOUNDARY
- MONITORING WELL
- SPRING LOCATION
- POTENTIOMETRIC SURFACE CONTOUR
- EASTERN LIMITS OF APPARENT CAPTURE ZONE

NOTES

1. WATER LEVELS FROM MONITORING WELLS, PIEZOMETERS OR OTHER SOURCES USED FOR THIS PLAN WERE OBSERVED ON THE DATE INDICATED.
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3. POTENTIOMETRIC CONTOUR LINES ARE BASED UPON INTERPOLATION BETWEEN OBSERVATION POINTS AND MAY NOT ACCURATELY DEPICT THE POTENTIOMETRIC SURFACE AT ALL TIMES.
4. WELLS THAT COULD NOT BE ACCESSED ARE LISTED IN APPENDIX A.

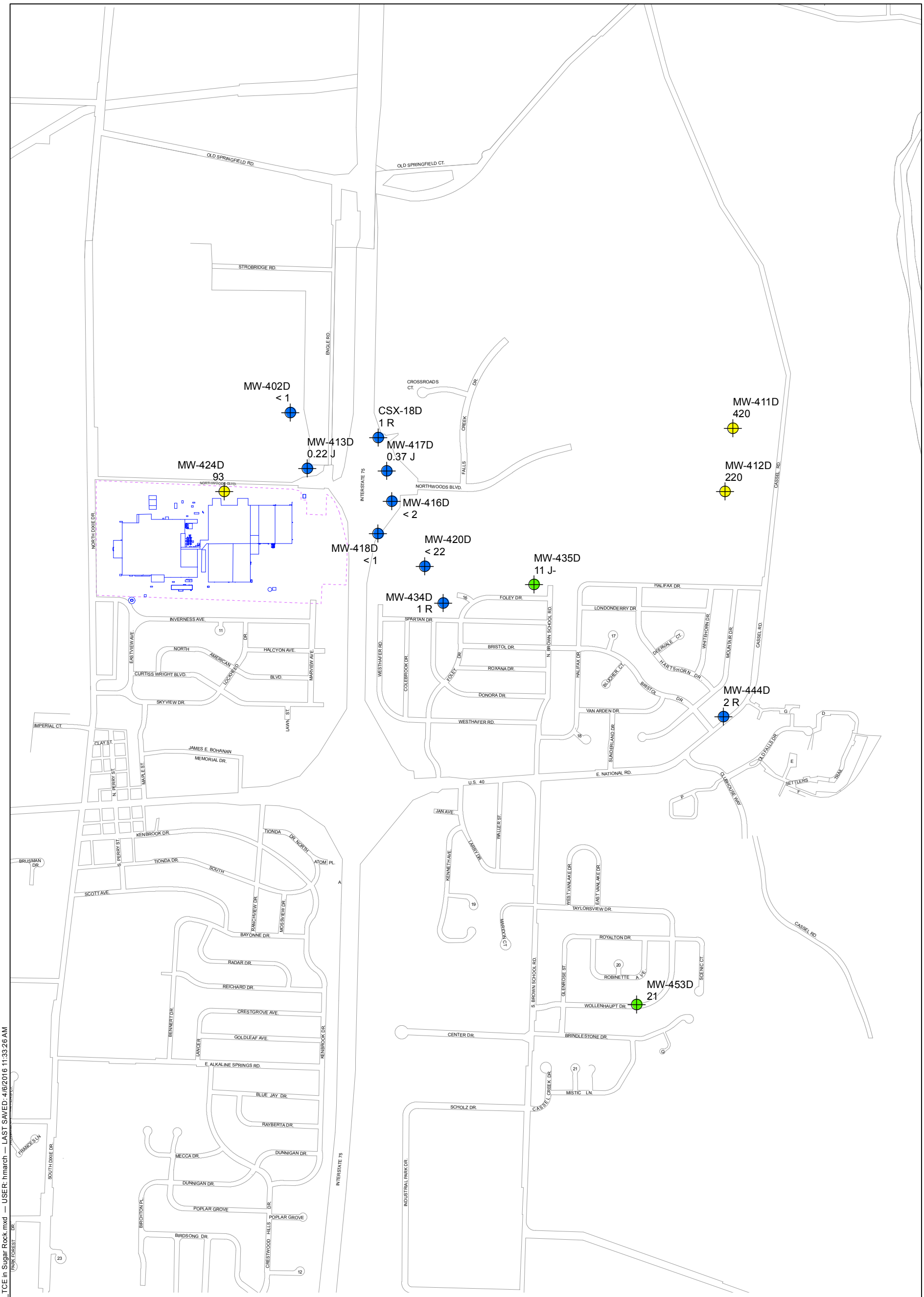
HALEY ALDRICH

MAHLE BEHR DAYTON LLC
VANDALIA, OHIO

DEEP BEDROCK (SUGAR ROCK/BELFAST TRANSITION ZONE) POTENTIOMETRIC SURFACE CONTOURS - 2 MARCH 2016

SCALE: AS SHOWN
APRIL 2016

FIGURE 17



LEGEND

- <1 - 10 ug/L
- >10 - 50 ug/L
- >50 - 500 ug/L
- >500 - 5,000 ug/L
- >5,000 ug/L
- MW-422D <1 — MONITORING WELL WITH TRICHLOROETHENE (TCE) RESULT IN ug/L

- ROAD
- APPROXIMATE FACILITY BOUNDARY
- BUILDING

N

0 1,000 2,000
SCALE IN FEET

HALEY ALDRICH

MAHLE BEHR DAYTON LLC
VANDALIA, OHIO

FIRST QUARTER 2016 TCE IN SUGAR ROCK

APRIL 2016

FIGURE 18

GIS FILE PATH: G:\79022\GIS\Quarterly\2016 Reporting\2016-1Q_TCE in Sugar Rock.mxd — USER: hmarch — LAST SAVED: 4/6/2016 11:33:26 AM

Attachment A
Water Level Measurements

ATTACHMENT A
MONTHLY GROUNDWATER ELEVATION DATA
BEDROCK MONITORING WELLS
OCTOBER 2015
MAHLE BEHR DAYTON LLC - VANDALIA, OHIO

Monitoring Well ID	Well Type	Date	Time	Water Level (ft)	Top of Riser Elevation (ft)	Groundwater Elevation (ft)	Remarks
CSX-18D	SR	10/12/2015	11:40	29.17	964.96	935.79	
MW-101D	SR	10/12/2015	13:00	45.72	988.24	942.52	
MW-204D	SR	10/12/2015	13:05	35.05	994.26	959.21	
MW-301D	SR	10/12/2015	11:55	35.20	970.44	935.24	
MW-401D	SR	10/12/2015	12:05	38.97	974.57	935.60	
MW-402D	SR	10/12/2015	16:00	28.22	966.36	938.14	
MW-403D	SR	10/12/2015	12:10	36.48	977.36	940.88	
MW-404D	SR	10/12/2015	0:00		988.83		could not locate
MW-405D	SR	10/12/2015	12:15	41.40	982.45	941.05	
MW-407D	SR	10/12/2015	15:40	21.65	956.24	934.59	
MW-408D	SR	10/12/2015	15:45	22.50	957.07	934.57	
MW-409D	SR	10/12/2015	15:55	12.95	942.49	929.54	
MW-410D	SR	10/12/2015	13:50	16.37	947.63	931.26	
MW-411D	SR	10/12/2015	14:55	28.07	943.43	915.36	
MW-412D	SR	10/12/2015	14:50	28.15	949.64	921.49	
MW-413D	SR	10/12/2015	12:00	34.70	970.13	935.43	
MW-414D	SR	10/12/2015	11:50	36.40	971.91	935.51	
MW-416D	SR	10/12/2015	11:35	30.42	965.84	935.42	
MW-417D	SR	10/12/2015	11:45	29.55	964.96	935.41	
MW-418D	SR	10/12/2015	11:30	29.54	965.06	935.52	
MW-419D	SR	10/12/2015	15:25	32.16	967.40	935.24	
MW-419M	MB	10/12/2015	15:20	32.10	967.50	935.40	
MW-420D	SR	10/12/2015	15:15	29.93	965.26	935.33	
MW-420M	MB	10/12/2015	15:10	29.20	964.85	935.65	
MW-421D	SR	10/12/2015	15:30	23.07	958.50	935.43	
MW-422D	SR	10/12/2015	12:25	41.41	980.98	939.57	
MW-424D	SR	10/12/2015	12:20	40.48	979.74	939.26	
MW-432D	SR	10/12/2015	13:25	39.72	974.50	934.78	
MW-432M	MB	10/12/2015	13:30	22.65	974.90	952.25	
MW-433D	SR	10/12/2015	14:15	35.07	970.43	935.36	
MW-434D	SR	10/12/2015	14:25	30.02	965.33	935.31	
MW-435D	SR	10/12/2015	14:20	21.04	955.91	934.87	
MW-436D	SR	10/12/2015	14:10	27.41	962.37	934.96	
MW-437D	SR	10/12/2015	14:35	15.25	948.38	933.13	
MW-438D	SR	10/12/2015	13:42	38.35	972.59	934.24	
MW-439D	SR	10/12/2015	0:00		955.58		blocked by car
MW-440D	SR	10/12/2015	14:30	4.63	936.70	932.07	
MW-441D	SR	10/12/2015	13:35	39.06	974.38	935.32	
MW-442D	SR	10/12/2015	13:10	40.35	975.68	935.33	
MW-443D	SR	10/12/2015	13:15	44.35	979.72	935.37	
MW-444D	SR	10/12/2015	15:00	9.11	934.18	925.07	
MW-447D	SR	10/12/2015	13:52	41.95	965.84	923.89	
MW-448D	SR	10/12/2015	15:05	12.55	935.38	922.83	
MW-449D	SR	10/12/2015	13:48	37.49	970.44	932.95	
MW-450D	SR	10/12/2015	14:40	17.99	910.51	892.52	
MW-451D	SR	10/12/2015	13:38	32.44	967.32	934.88	
MW-453D	SR	10/12/2015	13:59		923.25		flowing artesian

ATTACHMENT A
MONTHLY GROUNDWATER ELEVATION DATA
TOP OF ROCK MONITORING WELLS
OCTOBER 2015
MAHLE BEHR DAYTON LLC - VANDALIA, OHIO

Monitoring Well ID	Well Type	Date	Time	Water Level (ft)	Top of Riser Elevation (ft)	Groundwater Elevation (ft)	Remarks
CSX-22	TOR	10/14/2015	12:45	9.73	967.35	957.62	
MW-101S	TOR	10/14/2015	13:20	8.73	988.04	979.31	
MW-204S	TOR	10/14/2015	13:15	16.15	993.94	977.79	
MW-301S	TOR	10/14/2015	12:40	7.00	971.03	964.03	
MW-401S	TOR	10/14/2015	12:20	16.33	974.73	958.40	
MW-402S	TOR	10/14/2015	11:00	11.37	966.62	955.25	
MW-403S	TOR	10/14/2015	11:30	9.70	976.61	966.91	
MW-404S	TOR	10/14/2015	0:00		989.50		could not locate
MW-405S	TOR	10/14/2015	11:50	8.88	982.47	973.59	
MW-407S	TOR	10/14/2015	12:55	9.43	952.99	943.56	
MW-412S	TOR	10/14/2015	15:30	15.30	949.79	934.49	
MW-415S	TOR	10/14/2015	11:40	11.20	976.78	965.58	
MW-422S	TOR	10/14/2015	12:00	13.22	981.27	968.05	
MW-423S	TOR	10/14/2015	12:05	31.87	978.96	947.09	
MW-424S	TOR	10/14/2015	12:10	24.44	980.06	955.62	
MW-425S	TOR	10/14/2015	11:15	10.75	976.09	965.34	
MW-426S	TOR	10/14/2015	11:05	5.00	967.24	962.24	
MW-427S	TOR	10/14/2015	0:00		974.54		covered by truck
MW-428S	TOR	10/14/2015	13:35	13.63	985.43	971.80	
MW-429S	TOR	10/14/2015	13:30	10.27	985.08	974.81	
MW-430S	TOR	10/14/2015	11:55	12.54	984.76	972.22	
MW-431S	TOR	10/14/2015	13:25	9.65	982.46	972.81	
MW-445S	TOR	10/14/2015	11:10	21.82	976.07	954.25	
MW-446SR	TOR	10/14/2015	11:45	9.99	972.04	962.05	
MW-452S	TOR	10/14/2015	13:38	14.22	989.13	974.91	
MW-454S	TOR	10/14/2015	12:15	8.28	969.38	961.10	
MW-455S	TOR	10/14/2015	12:30	9.56	976.65	967.09	

ATTACHMENT A
MONTHLY GROUNDWATER ELEVATION DATA
OVERBURDEN MONITORING WELLS
OCTOBER 2015
MAHLE BEHR DAYTON LLC - VANDALIA, OHIC

Monitoring Well ID	Well Type	Date	Time	Water Level (ft)	Top of Riser Elevation (ft)	Groundwater Elevation (ft)	Remarks
HA-1	S2	10/16/2015	14:55	9.10	982.24	973.14	
HA-2	S2	10/16/2015	15:00	8.20	982.70	974.50	
HA-3	S2	10/16/2015	15:02	9.15	982.61	973.46	
HA-4	S1	10/16/2015	15:05	4.30	981.14	976.84	
HA-5	WT	10/16/2015	15:40	6.08	982.94	976.86	
IF-2	WT/S1	10/16/2015	16:30	5.16	978.64	973.48	
IF-3	WT/S1	10/16/2015	16:35	4.98	978.61	973.63	
MW-130	S1	10/16/2015	13:05	2.81	986.02	983.21	
MW-131	S1	10/16/2015	13:07	4.10	985.72	981.62	
MW-132	WT/S1	10/16/2015	13:41	4.36	984.07	979.71	
MW-133	S1	10/16/2015	13:25	5.10	983.13	978.03	
MW-134	WT/S1	10/16/2015	13:35	2.01	979.78	977.77	
MW-135	WT/S1	10/16/2015	14:03	4.88	984.86	979.98	
MW-136	WT/S1	10/16/2015	0:00		985.67		COVERED
MW-137	S2	10/16/2015	13:35	16.34	982.24	965.90	
MW-138	S1	10/16/2015	13:37	3.94	982.24	978.30	
MW-501	S2	10/16/2015	12:50	6.01	988.73	982.72	
MW-502	S1/S2	10/16/2015	12:36	7.45	990.20	982.75	
MW-503	S1	10/16/2015	11:30	10.50	994.49	983.99	
MW-504R	S1	10/16/2015	14:28	4.30	984.42	980.12	
MW-505	S1/S2	10/16/2015	12:46	8.15	989.28	981.13	
MW-506	S1	10/16/2015	17:05	5.19	988.96	983.77	
MW-507	S1	10/16/2015	14:37	7.61	988.96	981.35	
MW-508	S2	10/16/2015	12:00	13.60	989.07	975.47	
MW-509	S2	10/16/2015	13:17	10.35	985.40	975.05	
MW-510R	S2	10/16/2015	15:42	6.18	981.51	975.33	
MW-511	S2	10/16/2015	15:28	6.16	980.06	973.90	
MW-512	WT	10/16/2015	17:20	4.34	979.15	974.81	
MW-513	S2	10/16/2015	11:08	12.13	974.84	962.71	
MW-514	S2	10/16/2015	11:20	2.52	968.31	965.79	
MW-515	S2	10/16/2015	11:00	7.05	970.44	963.39	
MW-516	S2	10/16/2015	17:15	10.15	978.83	968.68	
MW-601	WT	10/16/2015	17:30	4.18	979.47	975.29	
MW-602	WT	10/16/2015	13:43	5.10	981.94	976.84	
MW-603	WT	10/16/2015	13:27	6.35	984.42	978.07	
MW-604	S1	10/16/2015	13:39	3.78	981.77	977.99	
MW-605	S2	10/16/2015	17:32	9.36	978.62	969.26	
MW-606	S1	10/16/2015	13:34	5.22	982.87	977.65	
MW-607	WT/S1	10/16/2015	16:20	4.95	979.87	974.92	
MW-700	S1	10/16/2015	14:32	8.24	988.77	980.53	
MW-701	S1	10/16/2015	16:10	8.10	988.92	980.82	
MW-702	S1	10/16/2015	0:00	1.40	989.24	987.84	
MW-703R	S1	10/16/2015	16:12	5.80	988.84	983.04	
MW-705	S1	10/16/2015	12:06	12.61	989.17	976.56	
MW-706	WT	10/16/2015	11:03	6.65	987.67	981.02	
MW-707	S1	10/16/2015	14:38	8.07	989.06	980.99	
MW-708	S2	10/16/2015	0:00	10.66	985.24	974.58	
MW-709	S1	10/16/2015	14:40	4.61	989.10	984.49	
MW-710	WT/S1	10/16/2015	14:05	5.43	985.15	979.72	
MW-711	S1	10/16/2015	15:49	8.39	989.16	980.77	
MW-712	WT/S1	10/16/2015	15:35	3.18	982.31	979.13	
MW-715	S1	10/16/2015	13:00	7.44	982.30	974.86	
MW-716	S2	10/16/2015	12:53	12.01	982.31	970.30	
MW-717	S2	10/16/2015	16:40	9.61	979.82	970.21	
MW-718	WT/S1	10/16/2015	16:50	5.89	980.27	974.38	
MW-719	S2	10/16/2015	17:20	8.16	979.01	970.85	
MW-720	S1	10/16/2015	11:32	7.28	979.29	972.01	
MW-721	S2	10/16/2015	13:16	10.26	984.81	974.55	
MW-722R	WT	10/16/2015	11:41	5.80	987.71	981.91	

Monitoring Well ID	Well Type	Date	Time	Water Level (ft)	Top of Riser Elevation (ft)	Groundwater Elevation (ft)	Remarks
MW-723	WT	10/16/2015	0:00		984.75		ABANDONED
MW-724	WT/S1	10/16/2015	11:35		979.15		
MW-725	S2	10/16/2015	11:46	8.64	978.46	969.82	
MW-726	WT/S1	10/16/2015	11:50	4.19	978.70	974.51	
MW-727	S2	10/16/2015	11:40	7.78	977.84	970.06	
MW-728	WT/S1	10/16/2015	11:42	4.34	978.07	973.73	
MW-729	WT/S1	10/16/2015	17:35	5.61	977.20	971.59	
MW-730	S1	10/16/2015	14:00	3.16	982.08	978.92	
MW-731	S2	10/16/2015	17:36	6.58	977.19	970.61	
MW-732	S1	10/16/2015	17:40	4.39	978.89	974.50	
MW-733	S2	10/16/2015	11:28	9.33	978.98	969.65	
MW-734	WT/S1	10/16/2015	11:25	7.61	979.14	971.53	
MW-735	S2	10/16/2015	0:00		985.47		NOT MEASURED
MW-736	S2	10/16/2015	14:30	6.18	979.45	973.27	
MW-737	S2	10/16/2015	17:43	10.19	978.96	968.77	
MW-738	WT	10/16/2015	11:50	5.40	987.75	982.35	
MW-739	WT	10/16/2015	12:03	7.35	989.05	981.70	
MW-740	S2	10/16/2015	15:35	2.19	973.82	971.63	
MW-741	S2	10/16/2015	15:56	11.16	976.19	965.03	
MW-742	S2	10/16/2015	12:05	11.16	980.10	968.94	
MW-743	S2	10/16/2015	11:52	7.73	976.89	969.16	
MW-744	WT	10/16/2015	11:55	6.90	987.55	980.65	
MW-745	S2	10/16/2015	15:20	7.18	982.49	975.31	
MW-746	S2	10/16/2015	11:45	11.70	987.64	975.94	
MW-747R	S1	10/16/2015	11:39	9.95	988.14	978.19	
MW-748	S1	10/16/2015	15:40	4.21	981.98	977.77	
MW-749	WT	10/16/2015	15:41	1.18	981.94	980.76	
MW-750	WT	10/16/2015	13:10	3.01	985.50	982.49	
MW-753	WT	10/16/2015	15:15	4.89	985.37	980.48	
MW-754	WT	10/16/2015	15:19	6.38	986.08	979.70	
MW-757	WT	10/16/2015	16:17	4.60	988.95	984.35	
MW-758	S2	10/16/2015	14:10	3.21	982.34	979.13	
MW-759	S2	10/16/2015	15:50	9.28	976.87	967.59	
MW-760	WT	10/16/2015	13:13	6.41	984.49	978.08	
MW-764	WT/S1	10/16/2015	13:18	5.23	982.78	977.55	
MW-765	WT	10/16/2015	16:15	5.60	988.96	983.36	
MW-766	WT	10/16/2015	0:00		987.15		COVERED
MW-767	WT	10/16/2015	14:36	7.43	988.92	981.49	
MW-768	WT	10/16/2015	0:00		985.64		ABANDONED
MW-770	S1/S2	10/16/2015	11:34	10.70	992.62	981.92	
MW-771	WT	10/16/2015	11:35	7.30	992.54	985.24	
MW-772R	WT	10/16/2015	14:40	8.03			
MW-773	S1	10/16/2015	12:34	6.00	989.24	983.24	
MW-774	WT	10/16/2015	12:33	4.10	989.06	984.96	
MW-775	WT	10/16/2015	14:53		976.91		NOT MEASURED
MW-776	WT/S1	10/16/2015	14:30	1.03	974.01	972.98	
MW-777	S1	10/16/2015	13:15	6.11	985.65	979.54	
MW-778	S2	10/16/2015	13:20	8.33	982.78	974.45	
MW-779	S2	10/16/2015	17:45	11.65	979.40	967.75	
MW-780R	WT/S1	10/16/2015	15:26	6.09	984.63	978.54	
MW-781	WT	10/16/2015	12:36	5.32	982.06	976.74	
MW-782	WT/S1	10/16/2015	15:25	4.19	980.19	976.00	
MW-784	WT	10/16/2015	17:47	5.38	980.09	974.71	
MW-786	S2	10/16/2015	0:00		979.35		NOT MEASURED
MW-787	WT	10/16/2015	12:56	9.11	982.12	973.01	
MW-788	WT	10/16/2015	11:48	8.55	986.90	978.35	
MW-789	WT/S1	10/16/2015	13:40	4.15	982.43	978.28	
MW-790	WT	10/16/2015	14:50	5.60	988.92	983.32	
MW-792	S2	10/16/2015	14:55	13.90	989.02	975.12	

ATTACHMENT A
MONTHLY GROUNDWATER ELEVATION DATA
OVERBURDEN MONITORING WELLS
OCTOBER 2015
MAHLE BEHR DAYTON LLC - VANDALIA, OHIC

Monitoring Well ID	Well Type	Date	Time	Water Level (ft)	Top of Riser Elevation (ft)	Groundwater Elevation (ft)	Remarks
MW-793	WT/S1	10/16/2015	12:49	7.75	982.03	974.28	
MW-794	WT/S1	10/16/2015	12:43	6.43	982.07	975.64	
MW-795	WT	10/16/2015	0:00		982.12		HAS PRODUCT
MW-796	WT/S1	10/16/2015	12:07	5.48	980.25	974.77	
MW-797	S1	10/16/2015	0:00		985.68		ABANDONED
MW-798	S2	10/16/2015	0:00		982.19		HAS PRODUCT
MW-799	S2	10/16/2015	12:34	10.86	982.09	971.23	
MW-800	S2	10/16/2015	14:45	10.51	978.91	968.40	
MW-801	S1	10/16/2015	0:00		987.12		COVERED
MW-802	WT	10/16/2015	14:47	13.22	988.71	975.49	
MW-804R	S1	10/16/2015	14:49	6.14	988.77	982.63	
MW-805	WT	10/16/2015	15:45	6.49	985.92	979.43	
MW-806	WT	10/16/2015	0:00		982.15		COVERED
MW-807	S2	10/16/2015	12:25	11.96	982.08	970.12	
MW-808	S2	10/16/2015	12:46	11.51	982.20	970.69	
MW-809	S1/S2	10/16/2015	12:30	8.50	982.16	973.66	
MW-810	WT	10/16/2015	12:10	8.58	980.40	972.82	
MW-811	WT	10/16/2015	15:30	4.21	982.88	978.67	
MW-812	S2	10/16/2015	11:10	7.63	969.95	962.32	
MW-813	S2	10/16/2015	11:05	8.40	975.43	967.03	
MW-814	WT/S1	10/16/2015	12:13	8.68	976.17	967.49	
MW-815	WT/S1	10/16/2015	12:18	8.06	979.30	971.24	
N001	WT	10/16/2015	0:00		985.43		COVERED
N002	WT	10/16/2015	16:20	9999.00	985.20	9999.00	DRY
N003	WT	10/16/2015	0:00		985.28		COVERED
N1	WT	10/16/2015	0:00	6.05	989.43	983.38	
N10	WT	10/16/2015	0:00		982.92		COVERED
N11	WT	10/16/2015	16:37	2.39	981.63	979.24	
N12	WT	10/16/2015	16:40	9.19	984.82	975.63	
N13	WT	10/16/2015	0:00	4.50	982.21	977.71	
N15	WT	10/16/2015	0:00	4.70	982.47	977.77	
N16	WT	10/16/2015	0:00	2.91	982.04	979.13	
N17	WT	10/16/2015	0:00	3.63	982.23	978.60	
N2	WT	10/16/2015	0:00		989.37		COVERED
N23	WT	10/16/2015	0:00	6.31	980.57	974.26	DRY
N25	WT	10/16/2015	0:00	9999.00	985.33	9999.00	DRY
N26	WT	10/16/2015	0:00	9999.00	983.29	9999.00	
N57	WT	10/16/2015	16:44	7.57	982.50	974.93	
N62 (E2)	WT	10/16/2015	0:00	5.10			
N63	WT	10/16/2015	0:00	7.36	979.19	971.83	
N64	WT	10/16/2015	0:00	7.42	978.34	970.92	
N7	WT	10/16/2015	0:00		985.19		COVERED
N9	WT	10/16/2015	16:30	7.03	985.38	978.35	
PZ-1	WT	10/16/2015	16:00	4.66	978.64	973.98	
PZ-10	WT	10/16/2015	13:30	7.00	983.23	976.23	
PZ-11	WT	10/16/2015	0:00		983.34		COVERED
PZ-12	WT	10/16/2015	14:11	4.55	982.95	978.40	
PZ-13	WT	10/16/2015	14:13	5.83	983.61	977.78	
PZ-14	WT	10/16/2015	14:15	4.65	984.21	979.56	
PZ-15	WT	10/16/2015	14:16	5.68	985.51	979.83	
PZ-16R	WT	10/16/2015	14:18	5.28	985.16	979.88	
PZ-17	WT	10/16/2015	14:23	3.42	983.49	980.07	
PZ-18	WT	10/16/2015	14:20	4.80	985.28	980.48	
PZ-19	WT	10/16/2015	13:28	6.60	983.58	976.98	
PZ-2	WT	10/16/2015	0:00		978.12		COVERED
PZ-20	WT	10/16/2015	13:22	6.16	982.28	976.12	
PZ-21	WT	10/16/2015	15:06	5.41	989.15	983.74	
PZ-22R	WT	10/16/2015	14:44	7.55	988.78	981.23	
PZ-23	WT	10/16/2015	15:45	9.13	989.04	979.91	

ATTACHMENT A
MONTHLY GROUNDWATER ELEVATION DATA
OVERBURDEN MONITORING WELLS
OCTOBER 2015
MAHLE BEHR DAYTON LLC - VANDALIA, OHIO

Monitoring Well ID	Well Type	Date	Time	Water Level (ft)	Top of Riser Elevation (ft)	Groundwater Elevation (ft)	Remarks
PZ-24	WT	10/16/2015	15:09	4.26	988.99	984.73	
PZ-25	WT	10/16/2015	15:12	4.70	988.92	984.22	
PZ-26	WT	10/16/2015	0:00		989.05		HAS PRODUCT
PZ-28	WT	10/16/2015	15:13	3.91	989.02	985.11	
PZ-29R	WT	10/16/2015	12:47	1.10	988.22	987.12	
PZ-3	WT	10/16/2015	13:30	2.10	981.55	979.45	
PZ-30	WT	10/16/2015	0:00		985.25		COVERED
PZ-31	WT	10/16/2015	12:04	6.15	988.98	982.83	
PZ-4	WT	10/16/2015	16:05	2.89	981.32	978.43	
PZ-5	WT	10/16/2015	17:50	4.16	979.59	975.43	
PZ-6	WT	10/16/2015	13:42	6.16	981.83	975.67	
PZ-7	WT	10/16/2015	13:47	4.80	982.66	977.86	
PZ-8	WT	10/16/2015	0:00		983.11		COVERED
PZ-9	WT	10/16/2015	13:32	5.45	982.63	977.18	
VAW-115R	WT/S1	10/16/2015	15:16	6.27	985.24	978.97	
VBW-111	WT/S1	10/16/2015	13:22	4.50	984.26	979.76	
VBW-112	S1	10/16/2015	13:20	6.68	985.44	978.76	
VBW-113	WT	10/16/2015	14:27	6.12	985.87	979.75	
VCW-110	WT/S1	10/16/2015	0:00		985.84		COVERED
VDW-108	S2	10/16/2015	13:24	13.12	983.76	970.64	
VEW-105	WT	10/16/2015	0:00		988.08		COVERED
VEW-106	WT	10/16/2015	11:52	5.90	987.79	981.89	
VEW-114R	WT	10/16/2015	11:40	3.79	988.86	985.07	
VFW-104	WT/S2	10/16/2015	0:00		978.74		COULD NOT LOCATE
VPW-101	S1	10/16/2015	12:54	3.61	986.81	983.20	
VPW-102	S2	10/16/2015	11:15	5.11	966.75	961.64	
VPW-103	WT/S1	10/16/2015	15:21	3.32	982.05	978.73	

ATTACHMENT A
MONTHLY GROUNDWATER ELEVATION DATA
BEDROCK MONITORING WELLS
NOVEMBER 2015
MAHLE BEHR DAYTON LLC - VANDALIA, OHIO

Monitoring Well ID	Well Type	Date	Time	Water Level (ft)	Top of Riser Elevation (ft)	Groundwater Elevation (ft)	Remarks
CSX-18D	SR	11/24/2015	10:17	27.15	964.96	937.81	
MW-101D	SR	11/24/2015	12:07	44.57	988.24	943.67	
MW-204D	SR	11/24/2015	12:04	33.81	994.26	960.45	
MW-301D	SR	11/24/2015	10:27	33.04	970.44	937.40	
MW-401D	SR	11/24/2015	12:30	37.03	974.57	937.54	
MW-402D	SR	11/24/2015	11:49	26.83	966.36	939.53	
MW-403D	SR	11/24/2015	11:54	35.34	977.36	942.02	
MW-404D	SR	11/24/2015	11:59	43.80	988.83	945.03	
MW-405D	SR	11/24/2015	12:16	39.20	982.45	943.25	
MW-407D	SR	11/24/2015	10:50	19.70	956.24	936.54	
MW-408D	SR	11/24/2015	10:54	20.55	957.07	936.52	
MW-409D	SR	11/24/2015	11:20	10.88	942.49	931.61	
MW-410D	SR	11/24/2015	11:02	14.51	947.63	933.12	
MW-411D	SR	11/24/2015	11:12	27.44	943.43	915.99	
MW-412D	SR	11/24/2015	11:08	26.86	949.64	922.78	
MW-413D	SR	11/24/2015	10:20	32.67	970.13	937.46	
MW-414D	SR	11/24/2015	10:24	34.44	971.91	937.47	
MW-416D	SR	11/24/2015	10:09	28.39	965.84	937.45	
MW-417D	SR	11/24/2015	10:13	27.49	964.96	937.47	
MW-418D	SR	11/24/2015	10:35	27.65	965.06	937.41	
MW-419D	SR	11/24/2015	11:28	30.28	967.40	937.12	
MW-419M	MB	11/24/2015	11:26	30.16	967.50	937.34	
MW-420D	SR	11/24/2015	11:35	28.04	965.26	937.22	
MW-420M	MB	11/24/2015	11:37	27.13	964.85	937.72	
MW-421D	SR	11/24/2015	11:40	21.17	958.50	937.33	
MW-422D	SR	11/24/2015	12:20	40.00	980.98	940.98	
MW-424D	SR	11/24/2015	12:24	38.85	979.74	940.89	
MW-432D	SR	11/24/2015	10:47	37.75	974.50	936.75	
MW-432M	MB	11/24/2015	10:48	22.75	974.90	952.15	
MW-433D	SR	11/24/2015	10:51	33.10	970.43	937.33	
MW-434D	SR	11/24/2015	11:01	28.10	965.33	937.23	
MW-435D	SR	11/24/2015	10:58	19.00	955.91	936.91	
MW-436D	SR	11/24/2015	10:54	25.35	962.37	937.02	
MW-437D	SR	11/24/2015	11:12	13.30	948.38	935.08	
MW-438D	SR	11/24/2015	11:41	35.35	972.59	937.24	
MW-439D	SR	11/24/2015	0:00		955.58		car over well
MW-440D	SR	11/24/2015	11:07	2.90	936.70	933.80	
MW-441D	SR	11/24/2015	11:35	37.10	974.38	937.28	
MW-442D	SR	11/24/2015	12:15	38.40	975.68	937.28	
MW-443D	SR	11/24/2015	12:07	42.40	979.72	937.32	
MW-444D	SR	11/24/2015	11:22	7.20	934.18	926.98	
MW-447D	SR	11/24/2015	12:00	40.80	965.84	925.04	
MW-448D	SR	11/24/2015	11:30	11.50	935.38	923.88	
MW-449D	SR	11/24/2015	11:45	36.15	970.44	934.29	
MW-450D	SR	11/24/2015	11:20	17.75	910.51	892.76	
MW-451D	SR	11/24/2015	11:37	36.60	967.32	930.72	
MW-453D	SR	11/24/2015	0:00		923.25		artesian

ATTACHMENT A
MONTHLY GROUNDWATER ELEVATION DATA
BEDROCK MONITORING WELLS
DECEMBER 2015
MAHLE BEHR DAYTON LLC - VANDALIA, OHIO

Monitoring Well ID	Well Type	Date	Time	Water Level (ft)	Top of Riser Elevation (ft)	Groundwater Elevation (ft)	Remarks
CSX-18D	SR	12/16/2015	11:45	27.77	964.96	937.19	
MW-101D	SR	12/16/2015	13:35	44.05	988.24	944.19	
MW-204D	SR	12/16/2015	13:39	33.50	994.26	960.76	
MW-301D	SR	12/16/2015	11:30	33.73	970.44	936.71	
MW-401D	SR	12/16/2015	13:02	37.52	974.57	937.05	
MW-402D	SR	12/16/2015	13:10	26.80	966.36	939.56	
MW-403D	SR	12/16/2015	13:21	35.20	977.36	942.16	
MW-404D	SR	12/16/2015	13:28	43.20	988.83	945.63	
MW-405D	SR	12/16/2015	13:46	38.77	982.45	943.68	
MW-407D	SR	12/16/2015	12:07	20.19	956.24	936.05	
MW-408D	SR	12/16/2015	12:15	21.03	957.07	936.04	
MW-409D	SR	12/16/2015	12:36	11.48	942.49	931.01	
MW-410D	SR	12/16/2015	12:24	14.92	947.63	932.71	
MW-411D	SR	12/16/2015	14:40	27.50	943.43	915.93	
MW-412D	SR	12/16/2015	14:48	27.07	949.64	922.57	
MW-413D	SR	12/16/2015	11:11	33.35	970.13	936.78	
MW-414D	SR	12/16/2015	11:15	35.03	971.91	936.88	
MW-416D	SR	12/16/2015	11:00	29.09	965.84	936.75	
MW-417D	SR	12/16/2015	11:05	28.16	964.96	936.80	
MW-418D	SR	12/16/2015	12:15	28.25	965.06	936.81	
MW-419D	SR	12/16/2015	12:50	30.75	967.40	936.65	
MW-419M	MB	12/16/2015	12:49	30.71	967.50	936.79	
MW-420D	SR	12/16/2015	12:45	28.52	965.26	936.74	
MW-420M	MB	12/16/2015	12:44	27.92	964.85	936.93	
MW-421D	SR	12/16/2015	12:55	21.68	958.50	936.82	
MW-422D	SR	12/16/2015	13:51	39.84	980.98	941.14	
MW-424D	SR	12/16/2015	13:55	38.72	979.74	941.02	
MW-432D	SR	12/16/2015	12:26	38.40	974.50	936.10	
MW-432M	MB	12/16/2015	12:25	22.40	974.90	952.50	
MW-433D	SR	12/16/2015	12:30	33.70	970.43	936.73	
MW-434D	SR	12/16/2015	12:40	28.65	965.33	936.68	
MW-435D	SR	12/16/2015	12:37	19.60	955.91	936.31	
MW-436D	SR	12/16/2015	12:34	25.99	962.37	936.38	
MW-437D	SR	12/16/2015	12:56	13.80	948.38	934.58	
MW-438D	SR	12/16/2015	13:25	35.90	972.59	936.69	
MW-439D	SR	12/16/2015	12:45	19.80	955.58	935.78	
MW-440D	SR	12/16/2015	12:50	3.40	936.70	933.30	
MW-441D	SR	12/16/2015	13:17	37.70	974.38	936.68	
MW-442D	SR	12/16/2015	13:48	39.00	975.68	936.68	
MW-443D	SR	12/16/2015	13:45	42.99	979.72	936.73	
MW-444D	SR	12/16/2015	13:06	7.80	934.18	926.38	
MW-447D	SR	12/16/2015	13:36	41.40	965.84	924.44	
MW-448D	SR	12/16/2015	13:11	12.00	935.38	923.38	
MW-449D	SR	12/16/2015	13:30	36.62	970.44	933.82	
MW-450D	SR	12/16/2015	13:02	17.40	910.51	893.11	
MW-451D	SR	12/16/2015	13:20	31.05	967.32	936.27	
MW-453D	SR	12/16/2015	0:00		923.25		Artesian

ATTACHMENT A
MONTHLY GROUNDWATER ELEVATION DATA
OVERBURDEN MONITORING WELLS
JANUARY 2016
MAHLE BEHR DAYTON LLC - VANDALIA, OHIO

Monitoring Well ID	Well Type	Date	Time	Water Level (ft)	Top of Riser Elevation (ft)	Groundwater Elevation (ft)	Remarks
HA-1	S2	1/7/2016	13:21	7.32	982.24	974.92	
HA-2	S2	1/7/2016	13:23	6.57	982.70	976.13	
HA-3	S2	1/7/2016	13:28	8.35	982.61	974.26	
HA-4	S1	1/7/2016	13:30	4.05	981.14	977.09	
HA-5	WT	1/7/2016	13:26	5.99	982.94	976.95	
IF-2	WT/S1	1/7/2016	0:00		978.64		frozen mud
IF-3	WT/S1	1/7/2016	0:00		978.61		frozen mud
MW-130	S1	1/7/2016	11:23	3.94	986.02	982.08	
MW-131	S1	1/7/2016	11:13	4.31	985.72	981.41	
MW-132	WT/S1	1/7/2016	11:30	3.73	984.07	980.34	
MW-133	S1	1/7/2016	11:41	4.83	983.13	978.30	
MW-134	WT/S1	1/7/2016	0:00		979.78		not measured
MW-135	WT/S1	1/7/2016	11:46	3.84	984.86	981.02	
MW-136	WT/S1	1/7/2016	0:00		985.67		covered
MW-137	S2	1/7/2016	13:35	6.79	982.24	975.45	
MW-138	S1	1/7/2016	13:36	3.05	982.24	979.19	
MW-501	S2	1/7/2016	11:09	5.01	988.73	983.72	
MW-502	S1/S2	1/7/2016	12:00	4.42	990.20	985.78	
MW-503	S1	1/7/2016	13:58	6.81	994.49	987.68	
MW-504R	S1	1/7/2016	12:43	2.88	984.42	981.54	
MW-505	S1/S2	1/7/2016	12:38	5.55	989.28	983.73	
MW-506	S1	1/7/2016	12:37	3.93	988.96	985.03	
MW-507	S1	1/7/2016	12:23	5.63	988.96	983.33	
MW-508	S2	1/7/2016	11:40	10.70	989.07	978.37	
MW-509	S2	1/7/2016	14:01	7.89	985.40	977.51	
MW-510R	S2	1/7/2016	10:55	5.78	981.51	975.73	
MW-511	S2	1/7/2016	10:39	5.20	980.06	974.86	
MW-512	WT	1/7/2016	9:32	4.33	979.15	974.82	
MW-513	S2	1/7/2016	9:44	11.15	974.84	963.69	
MW-514	S2	1/7/2016	9:48	0.20	968.31	968.11	
MW-515	S2	1/7/2016	10:10	4.94	970.44	965.50	
MW-516	S2	1/7/2016	9:30	4.19	978.83	974.64	
MW-601	WT	1/7/2016	9:18	3.96	979.47	975.51	
MW-602	WT	1/7/2016	13:40	3.52	981.94	978.42	
MW-603	WT	1/7/2016	13:50	5.98	984.42	978.44	
MW-604	S1	1/7/2016	13:38	3.35	981.77	978.42	
MW-605	S2	1/7/2016	9:26	4.85	978.62	973.77	
MW-606	S1	1/7/2016	13:40	4.66	982.87	978.21	
MW-607	WT/S1	1/7/2016	9:12	4.15	979.87	975.72	
MW-700	S1	1/7/2016	12:32	5.78	988.77	982.99	
MW-701	S1	1/7/2016	12:33	5.48	988.92	983.44	
MW-702	S1	1/7/2016	12:31	2.02	989.24	987.22	
MW-703R	S1	1/7/2016	12:20	3.05	988.84	985.79	
MW-705	S1	1/7/2016	11:43	10.85	989.01	978.16	
MW-706	WT	1/7/2016	11:38	6.20	987.67	981.47	
MW-707	S1	1/7/2016	12:30	5.45	989.06	983.61	
MW-708	S2	1/7/2016	12:07	7.73	985.24	977.51	
MW-709	S1	1/7/2016	12:14	7.25	989.10	981.85	
MW-710	WT/S1	1/7/2016	11:44	4.10	985.15	981.05	
MW-711	S1	1/7/2016	12:24	8.14	989.16	981.02	
MW-712	WT/S1	1/7/2016	0:00		982.31		not measured
MW-715	S1	1/7/2016	9:51	6.69	982.30	975.61	
MW-716	S2	1/7/2016	10:03	7.95	982.31	974.36	
MW-717	S2	1/7/2016	0:00		979.82		frozen cap
MW-718	WT/S1	1/7/2016	10:21	3.95	980.27	976.32	
MW-719	S2	1/7/2016	10:27	6.08	979.01	972.93	
MW-720	S1	1/7/2016	9:36	6.99	979.29	972.30	
MW-721	S2	1/7/2016	14:00	7.34	984.81	977.47	
MW-722R	WT	1/7/2016	11:27	2.78	987.55	984.77	

ATTACHMENT A
MONTHLY GROUNDWATER ELEVATION DATA
OVERBURDEN MONITORING WELLS
JANUARY 2016
MAHLE BEHR DAYTON LLC - VANDALIA, OHIO

Monitoring Well ID	Well Type	Date	Time	Water Level (ft)	Top of Riser Elevation (ft)	Groundwater Elevation (ft)	Remarks
MW-723	WT	1/7/2016	0:00		984.75		ABANDONED
MW-724	WT/S1	1/7/2016	9:34		979.15		not measured
MW-725	S2	1/7/2016	9:38	5.88	978.46	972.58	
MW-726	WT/S1	1/7/2016	9:39	3.63	978.70	975.07	
MW-727	S2	1/7/2016	14:40	5.28	977.84	972.56	
MW-728	WT/S1	1/7/2016	14:33	2.92	978.07	975.15	
MW-729	WT/S1	1/7/2016	10:31	3.55	977.20	973.65	
MW-730	S1	1/7/2016	13:54	2.85	982.08	979.23	
MW-731	S2	1/7/2016	10:29	4.65	977.19	972.54	
MW-732	S1	1/7/2016	9:24	4.11	978.89	974.78	
MW-733	S2	1/7/2016	9:28	6.53	978.98	972.45	
MW-734	WT/S1	1/7/2016	9:31	7.09	979.14	972.05	
MW-735	S2	1/7/2016	12:05	6.73	985.40	978.67	
MW-736	S2	1/7/2016	13:50	4.60	979.45	974.85	
MW-737	S2	1/7/2016	10:25	6.26	978.96	972.70	
MW-738	WT	1/7/2016	11:35	2.72	987.75	985.03	
MW-739	WT	1/7/2016	11:45	3.90	989.05	985.15	
MW-740	S2	1/7/2016	10:45	1.04	973.82	972.78	
MW-741	S2	1/7/2016	10:18	8.09	976.19	968.10	
MW-742	S2	1/7/2016	14:18	7.05	980.10	973.05	
MW-743	S2	1/7/2016	9:41	8.35	976.89	968.54	
MW-744	WT	1/7/2016	11:39	6.20	987.36	981.16	
MW-745	S2	1/7/2016	10:47	6.34	982.49	976.15	
MW-746	S2	1/7/2016	11:32	8.52	987.64	979.12	
MW-747R	S1	1/7/2016	11:25	6.79	988.14	981.35	
MW-748	S1	1/7/2016	10:57	3.91	981.98	978.07	
MW-749	WT	1/7/2016	10:58	2.09	981.94	979.85	
MW-750	WT	1/7/2016	11:13	3.40	985.32	981.92	
MW-753	WT	1/7/2016	11:19	2.68	985.37	982.69	
MW-754	WT	1/7/2016	11:20	3.62	985.85	982.23	
MW-757	WT	1/7/2016	12:16	2.33	988.95	986.62	
MW-758	S2	1/7/2016	10:57	2.42	982.34	979.92	
MW-759	S2	1/7/2016	10:41	3.93	976.87	972.94	
MW-760	WT	1/7/2016	14:09	5.79	984.49	978.70	
MW-764	WT/S1	1/7/2016	13:54	4.31	982.78	978.47	
MW-765	WT	1/7/2016	12:26	2.91	988.96	986.05	
MW-766	WT	1/7/2016	0:00		987.15		covered
MW-767	WT	1/7/2016	12:26	5.86	988.92	983.06	
MW-768	WT	1/7/2016	0:00		985.64		ABANDONED
MW-770	S1/S2	1/7/2016	11:52	7.45	992.62	985.17	
MW-771	WT	1/7/2016	11:54	3.50	992.54	989.04	
MW-772R	WT	1/7/2016	12:15	5.48			
MW-773	S1	1/7/2016	11:56	3.32	989.24	985.92	
MW-774	WT	1/7/2016	11:58	2.45	989.06	986.61	
MW-775	WT	1/7/2016	13:46	2.37	976.91	974.54	
MW-776	WT/S1	1/7/2016	10:43	1.63	974.01	972.38	
MW-777	S1	1/7/2016	11:26	5.79	985.65	979.86	
MW-778	S2	1/7/2016	13:55	5.39	982.78	977.39	
MW-779	S2	1/7/2016	9:20	5.90	979.40	973.50	
MW-780R	WT/S1	1/7/2016	12:09	4.43	984.63	980.20	
MW-781	WT	1/7/2016	10:09	4.63	982.06	977.43	
MW-782	WT/S1	1/7/2016	10:41	4.17	980.19	976.02	
MW-784	WT	1/7/2016	10:37	2.71	980.09	977.38	
MW-786	S2	1/7/2016	9:22	8.16	979.35	971.19	
MW-787	WT	1/7/2016	10:01	6.60	982.12	975.52	
MW-788	WT	1/7/2016	11:29	5.56	986.90	981.34	
MW-789	WT/S1	1/7/2016	11:28	3.00	982.43	979.43	
MW-790	WT	1/7/2016	12:30	3.10	988.92	985.82	
MW-792	S2	1/7/2016	12:28	10.27	989.02	978.75	

ATTACHMENT A
MONTHLY GROUNDWATER ELEVATION DATA
OVERBURDEN MONITORING WELLS
JANUARY 2016
MAHLE BEHR DAYTON LLC - VANDALIA, OHIO

Monitoring Well ID	Well Type	Date	Time	Water Level (ft)	Top of Riser Elevation (ft)	Groundwater Elevation (ft)	Remarks
MW-793	WT/S1	1/7/2016	0:00		982.03		covered
MW-794	WT/S1	1/7/2016	10:07	5.68	982.07	976.39	
MW-795	WT	1/7/2016	0:00		982.12		has product
MW-796	WT/S1	1/7/2016	14:15	4.50	980.25	975.75	
MW-797	S1	1/7/2016	0:00		985.68		ABANDONED
MW-798	S2	1/7/2016	0:00		982.19		has product
MW-799	S2	1/7/2016	10:11	7.39	982.09	974.70	
MW-800	S2	1/7/2016	10:38	6.20	978.91	972.71	
MW-801	S1	1/7/2016	0:00		987.12		covered
MW-802	WT	1/7/2016	12:40	3.40	988.71	985.31	
MW-804R	S1	1/7/2016	12:39	10.36	988.77	978.41	
MW-805	WT	1/7/2016	11:21	3.78	985.92	982.14	
MW-806	WT	1/7/2016	0:00		982.15		covered
MW-807	S2	1/7/2016	9:56	9.85	982.08	972.23	
MW-808	S2	1/7/2016	10:05	7.68	982.20	974.52	
MW-809	S1/S2	1/7/2016	10:13	8.29	982.16	973.87	
MW-810	WT	1/7/2016	14:23	8.18	980.40	972.22	
MW-811	WT	1/7/2016	0:00		982.88		frozen cap
MW-812	S2	1/7/2016	9:57	5.02	969.95	964.93	
MW-813	S2	1/7/2016	10:02	5.89	975.43	969.54	
MW-814	WT/S1	1/7/2016	14:25	5.67	976.17	970.50	
MW-815	WT/S1	1/7/2016	0:00		979.30		blocked
N001	WT	1/7/2016	0:00		985.43		covered
N002	WT	1/7/2016	12:51	5.45	985.20	979.75	
N003	WT	1/7/2016	13:32	4.20	985.28	981.08	
N1	WT	1/7/2016	13:34	5.75	989.43	983.68	
N10	WT	1/7/2016	0:00		982.92		covered
N11	WT	1/7/2016	9:43	2.57	981.63	979.06	
N12	WT	1/7/2016	9:47	9.10	984.82	975.72	
N13	WT	1/7/2016	9:45	8.36	982.21	973.85	
N15	WT	1/7/2016	9:39	4.31	982.47	978.16	
N16	WT	1/7/2016	9:34	2.70	982.04	979.34	
N17	WT	1/7/2016	9:35	3.55	982.23	978.68	
N2	WT	1/7/2016	0:00		989.37		covered
N23	WT	1/7/2016	9:37	6.18	980.57	974.39	
N25	WT	1/7/2016	12:57	4.70	985.33	980.63	
N26	WT	1/7/2016	12:55	4.30	983.29	978.99	
N57	WT	1/7/2016	9:43	7.55	982.50	974.95	
N62 (E2)	WT	1/7/2016	9:41	4.70			
N63	WT	1/7/2016	14:05	7.80	979.19	971.39	
N64	WT	1/7/2016	14:03	7.90	978.34	970.44	
N7	WT	1/7/2016	0:00		985.19		covered
N9	WT	1/7/2016	12:52	7.00	985.38	978.38	
PZ-1	WT	1/7/2016	13:15	3.37	978.64	975.27	
PZ-10	WT	1/7/2016	13:47	6.58	983.23	976.65	
PZ-11	WT	1/7/2016	0:00		983.34		covered
PZ-12	WT	1/7/2016	12:01	1.16	982.95	981.79	
PZ-13	WT	1/7/2016	12:02	1.01	983.61	982.60	
PZ-14	WT	1/7/2016	11:59	2.97	984.21	981.24	
PZ-15	WT	1/7/2016	11:58	4.89	985.51	980.62	
PZ-16R	WT	1/7/2016	11:56	4.95	985.16	980.21	
PZ-17	WT	1/7/2016	11:47	2.89	983.49	980.60	
PZ-18	WT	1/7/2016	11:49	3.79	985.28	981.49	
PZ-19	WT	1/7/2016	13:48	5.94	983.58	977.64	
PZ-2	WT	1/7/2016	0:00		978.12		covered
PZ-20	WT	1/7/2016	13:56	3.62	982.28	978.66	
PZ-21	WT	1/7/2016	12:18	2.47	988.88	986.41	
PZ-22R	WT	1/7/2016	12:44	5.65	988.78	983.13	
PZ-23	WT	1/7/2016	12:22	5.77	989.04	983.27	

ATTACHMENT A
MONTHLY GROUNDWATER ELEVATION DATA
OVERBURDEN MONITORING WELLS
JANUARY 2016
MAHLE BEHR DAYTON LLC - VANDALIA, OHIO

Monitoring Well ID	Well Type	Date	Time	Water Level (ft)	Top of Riser Elevation (ft)	Groundwater Elevation (ft)	Remarks
PZ-24	WT	1/7/2016	12:09	2.64	988.82	986.18	
PZ-25	WT	1/7/2016	12:07	2.33	988.71	986.38	
PZ-26	WT	1/7/2016	0:00		989.05		has product
PZ-28	WT	1/7/2016	12:11	3.18	989.02	985.84	
PZ-29R	WT	1/7/2016	12:35	3.14	988.22	985.08	
PZ-3	WT	1/7/2016	11:40	4.08	981.55	977.47	
PZ-30	WT	1/7/2016	11:50	4.70	985.25	980.55	
PZ-31	WT	1/7/2016	11:46	3.55	988.98	985.43	
PZ-4	WT	1/7/2016	13:29	3.20	981.32	978.12	
PZ-5	WT	1/7/2016	9:28	3.86	979.59	975.73	
PZ-6	WT	1/7/2016	13:44	4.71	981.83	977.12	
PZ-7	WT	1/7/2016	13:32	4.49	982.66	978.17	
PZ-8	WT	1/7/2016	13:27	4.94	983.11	978.17	
PZ-9	WT	1/7/2016	13:41	4.42	982.63	978.21	
VAW-115R	WT/S1	1/7/2016	11:17	3.66	985.24	981.58	
VBW-111	WT/S1	1/7/2016	11:35	4.38	984.26	979.88	
VBW-112	S1	1/7/2016	11:31	6.48	985.44	978.96	
VBW-113	WT	1/7/2016	11:33	4.62	985.87	981.25	
VCW-110	WT/S1	1/7/2016	11:51	4.79	985.84	981.05	covered
VDW-108	S2	1/7/2016	13:52	9.04	983.76	974.72	
VEW-105	WT	1/7/2016	0:00		988.08		covered
VEW-106	WT	1/7/2016	11:33	3.37	987.79	984.42	
VEW-114R	WT	1/7/2016	11:50	3.52	988.86	985.34	
VFW-104	WT/S2	1/7/2016	10:33	3.45	978.74	975.29	
VPW-101	S1	1/7/2016	11:07	3.45	986.81	983.36	
VPW-102	S2	1/7/2016	9:54	2.65	966.75	964.10	
VPW-103	WT/S1	1/7/2016	10:46	3.50	982.05	978.55	

ATTACHMENT A
MONTHLY GROUNDWATER ELEVATION DATA
BEDROCK MONITORING WELLS
JANUARY 2016
MAHLE BEHR DAYTON LLC - VANDALIA, OHIO

Monitoring Well ID	Well Type	Date	Time	Water Level (ft)	Top of Riser Elevation (ft)	Groundwater Elevation (ft)	Remarks
CSX-18D	SR	1/12/2016	13:49	22.78	964.96	942.18	
MW-101D	SR	1/12/2016	12:45	40.20	988.15	947.95	
MW-204D	SR	1/12/2016	12:55	30.29	994.26	963.97	
MW-301D	SR	1/12/2016	11:20	28.77	970.44	941.67	
MW-401D	SR	1/12/2016	12:00	32.43	974.57	942.14	
MW-402D	SR	1/12/2016	13:30	22.34	966.36	944.02	
MW-403D	SR	1/12/2016	13:45	30.93	977.36	946.43	
MW-404D	SR	1/12/2016	12:38	39.45	988.83	949.38	
MW-405D	SR	1/12/2016	12:14	34.55	982.45	947.90	
MW-407D	SR	1/12/2016	14:29	14.84	956.24	941.40	
MW-408D	SR	1/12/2016	14:35	15.65	957.07	941.42	
MW-409D	SR	1/12/2016	14:55	7.14	942.49	935.35	
MW-410D	SR	1/12/2016	14:45	10.33	947.63	937.30	
MW-411D	SR	1/12/2016	15:30	24.04	943.43	919.39	
MW-412D	SR	1/12/2016	15:45	24.49	949.64	925.15	
MW-413D	SR	1/12/2016	11:25	28.22	970.13	941.91	
MW-414D	SR	1/12/2016	11:10	29.90	971.91	942.01	
MW-416D	SR	1/12/2016	11:40	23.92	965.84	941.92	
MW-417D	SR	1/12/2016	13:55	23.13	964.96	941.83	
MW-418D	SR	1/12/2016	13:30	23.26	965.06	941.80	
MW-419D	SR	1/12/2016	14:12	25.50	967.40	941.90	
MW-419M	MB	1/12/2016	14:10	25.63	967.50	941.87	
MW-420D	SR	1/12/2016	14:00	23.55	965.26	941.71	
MW-420M	MB	1/12/2016	14:01	22.99	964.85	941.86	
MW-421D	SR	1/12/2016	14:15	16.65	958.50	941.85	
MW-422D	SR	1/12/2016	12:30	35.69	980.98	945.29	
MW-424D	SR	1/12/2016	12:22	34.53	979.74	945.21	
MW-432D	SR	1/12/2016	16:00	33.17	974.50	941.33	
MW-432M	MB	1/12/2016	15:55	19.83	974.90	955.07	
MW-433D	SR	1/12/2016	12:45	28.40	970.43	942.03	
MW-434D	SR	1/12/2016	0:00		965.33		snow covered
MW-435D	SR	1/12/2016	0:00		955.91		snow covered
MW-436D	SR	1/12/2016	12:52	20.20	962.37	942.17	
MW-437D	SR	1/12/2016	13:26	8.65	948.38	939.73	
MW-438D	SR	1/12/2016	14:15	30.70	972.59	941.89	
MW-439D	SR	1/12/2016	13:15	13.70	955.58	941.88	
MW-440D	SR	1/12/2016	13:20		936.70		artesian
MW-441D	SR	1/12/2016	14:00	32.62	974.38	941.76	
MW-442D	SR	1/12/2016	14:45	33.75	975.68	941.93	
MW-443D	SR	1/12/2016	14:40	37.80	979.72	941.92	
MW-444D	SR	1/12/2016	13:40	3.90	934.18	930.28	
MW-447D	SR	1/12/2016	14:35	38.70	965.84	927.14	
MW-448D	SR	1/12/2016	13:50	9.20	935.38	926.18	
MW-449D	SR	1/12/2016	0:00		970.44		frozen
MW-450D	SR	1/12/2016	13:35	15.50	910.51	895.01	
MW-451D	SR	1/12/2016	0:00		967.32		snow covered
MW-453D	SR	1/12/2016	0:00		923.25		artesian

ATTACHMENT A
MONTHLY GROUNDWATER ELEVATION DATA
TOP OF ROCK MONITORING WELLS
JANUARY 2016
MAHLE BEHR DAYTON LLC - VANDALIA, OHIO

Monitoring Well ID	Well Type	Date	Time	Water Level (ft)	Top of Riser Elevation (ft)	Groundwater Elevation (ft)	Remarks
CSX-22	TOR	1/15/2016	14:02	6.31	967.35	961.04	
MW-101S	TOR	1/15/2016	13:32	4.91	988.04	983.13	
MW-204S	TOR	1/15/2016	13:30	12.30	993.94	981.64	
MW-301S	TOR	1/15/2016	14:42	3.82	971.03	967.21	
MW-401S	TOR	1/15/2016	14:21	12.87	974.73	961.86	
MW-402S	TOR	1/15/2016	11:40	8.65	966.62	957.97	
MW-403S	TOR	1/15/2016	12:35	5.89	976.61	970.72	
MW-404S	TOR	1/15/2016	13:20	6.15	989.50	983.35	
MW-405S	TOR	1/15/2016	12:53	5.47	982.47	977.00	
MW-407S	TOR	1/15/2016	12:15	2.00	952.99	950.99	
MW-412S	TOR	1/15/2016	13:01	9.80	949.79	939.99	
MW-415S	TOR	1/15/2016	13:07	7.07	976.78	969.71	
MW-422S	TOR	1/15/2016	13:01	9.17	981.27	972.10	
MW-423S	TOR	1/15/2016	13:07	26.85	978.96	952.11	
MW-424S	TOR	1/15/2016	13:11	20.18	980.06	959.88	
MW-425S	TOR	1/15/2016	11:58	6.77	976.09	969.32	
MW-426S	TOR	1/15/2016	11:49	2.12	967.24	965.12	
MW-427S	TOR	1/15/2016	0:00		974.54		covered
MW-428S	TOR	1/15/2016	0:00		985.43		frozen
MW-429S	TOR	1/15/2016	13:36	6.70	985.08	978.38	
MW-430S	TOR	1/15/2016	13:00	9.10	984.76	975.66	
MW-431S	TOR	1/15/2016	13:34	6.45	982.46	976.01	
MW-445S	TOR	1/15/2016	12:23	17.71	976.07	958.36	
MW-446SR	TOR	1/15/2016	12:41	7.18	972.04	964.86	
MW-452S	TOR	1/15/2016	13:48	11.17	989.13	977.96	
MW-454S	TOR	1/15/2016	11:25	5.04	969.38	964.34	
MW-455S	TOR	1/15/2016	14:13	5.95	976.65	970.70	

ATTACHMENT A
MONTHLY GROUNDWATER ELEVATION DATA
BEDROCK MONITORING WELLS
FEBRUARY 2016
MAHLE BEHR DAYTON LLC - VANDALIA, OHIO

Monitoring Well ID	Well Type	Date	Time	Water Level (ft)	Top of Riser Elevation (ft)	Groundwater Elevation (ft)	Remarks
CSX-18D	SR	2/17/2016	10:30	24.52	964.96	940.44	
MW-101D	SR	2/17/2016	15:59	41.29	988.15	946.86	
MW-204D	SR	2/17/2016	16:05	31.49	994.26	962.77	
MW-301D	SR	2/17/2016	10:50	30.39	970.44	940.05	
MW-401D	SR	2/17/2016	11:15	34.28	974.57	940.29	no cap
MW-402D	SR	2/17/2016	11:25	23.66	966.36	942.70	
MW-403D	SR	2/17/2016	14:23	31.19	977.36	946.17	
MW-404D	SR	2/17/2016	15:54	40.53	988.83	948.30	
MW-405D	SR	2/17/2016	15:40	36.03	982.45	946.42	
MW-407D	SR	2/17/2016	14:55	16.89	956.24	939.35	
MW-408D	SR	2/17/2016	15:05	17.72	957.07	939.35	
MW-409D	SR	2/17/2016	15:22	8.71	942.49	933.78	
MW-410D	SR	2/17/2016	15:12	12.05	947.63	935.58	
MW-411D	SR	2/17/2016	12:15	26.27	943.43	917.16	
MW-412D	SR	2/17/2016	12:00	25.17	949.64	924.47	
MW-413D	SR	2/17/2016	10:12	30.03	970.13	940.10	
MW-414D	SR	2/17/2016	10:00	31.72	971.91	940.19	
MW-416D	SR	2/17/2016	10:20	24.78	965.84	941.06	
MW-417D	SR	2/17/2016	10:40	24.88	964.96	940.08	
MW-418D	SR	2/17/2016	11:00	23.74	965.06	941.32	
MW-419D	SR	2/17/2016	14:43	27.49	967.40	939.91	
MW-419M	MB	2/17/2016	14:45	27.47	967.50	940.03	
MW-420D	SR	2/17/2016	14:33	25.29	965.26	939.97	
MW-420M	MB	2/17/2016	14:35	24.72	964.85	940.13	
MW-421D	SR	2/17/2016	15:28	18.49	958.50	940.01	
MW-422D	SR	2/17/2016	15:45	36.96	980.98	944.02	
MW-424D	SR	2/17/2016	15:48	35.85	979.74	943.89	
MW-432D	SR	2/17/2016	13:20	35.08	974.50	939.42	
MW-432M	MB	2/17/2016	13:25	20.20	974.90	954.70	
MW-433D	SR	2/17/2016	13:10	30.39	970.43	940.04	
MW-434D	SR	2/17/2016	13:06	25.34	965.33	939.99	
MW-435D	SR	2/17/2016	13:03	16.22	955.91	939.69	
MW-436D	SR	2/17/2016	12:59	22.60	962.37	939.77	
MW-437D	SR	2/17/2016	12:45	10.59	948.38	937.79	
MW-438D	SR	2/17/2016	13:43	32.65	972.59	939.94	
MW-439D	SR	2/17/2016	12:54	16.29	955.58	939.29	
MW-440D	SR	2/17/2016	12:51	0.40	936.70	936.30	
MW-441D	SR	2/17/2016	13:34	34.30	974.38	940.08	
MW-442D	SR	2/17/2016	16:10	35.73	975.68	939.95	
MW-443D	SR	2/17/2016	16:15	39.62	979.72	940.10	
MW-444D	SR	2/17/2016	12:30	5.51	934.18	928.67	
MW-447D	SR	2/17/2016	12:52	40.05	965.84	925.79	break ice
MW-448D	SR	2/17/2016	12:34	10.29	935.38	925.09	
MW-449D	SR	2/17/2016	13:47	34.84	970.44	935.60	break ice
MW-450D	SR	2/17/2016	11:48	17.34	910.51	893.17	
MW-451D	SR	2/17/2016	13:37	27.85	967.32	939.47	break ice
MW-453D	SR	2/17/2016	13:55		923.25		Artesian

ATTACHMENT A
MONTHLY GROUNDWATER ELEVATION DATA
BEDROCK MONITORING WELLS
MARCH 2016
MAHLE BEHR DAYTON LLC - VANDALIA, OHIO

Monitoring Well ID	Well Type	Date	Time	Water Level (ft)	Top of Riser Elevation (ft)	Groundwater Elevation (ft)	Remarks
CSX-18D	SR	3/2/2016	11:39	21.59	964.96	943.37	
MW-101D	SR	3/2/2016	12:28	39.30	988.15	948.85	
MW-204D	SR	3/2/2016	12:30	29.67	994.26	964.59	
MW-301D	SR	3/2/2016	11:31	26.22	970.44	944.22	
MW-401D	SR	3/2/2016	11:56	31.35	974.57	943.22	
MW-402D	SR	3/2/2016	12:00	21.19	966.36	945.17	
MW-403D	SR	3/2/2016	12:05	29.85	977.36	947.51	
MW-404D	SR	3/2/2016	12:22	38.57	988.83	950.26	
MW-405D	SR	3/2/2016	12:10	34.12	982.45	948.33	
MW-407D	SR	3/2/2016	13:35	13.64	956.24	942.60	
MW-408D	SR	3/2/2016	13:40	14.46	957.07	942.61	
MW-409D	SR	3/2/2016	13:50	6.36	942.49	936.13	
MW-410D	SR	3/2/2016	13:55	9.29	947.63	938.34	
MW-411D	SR	3/2/2016	14:20	25.27	943.43	918.16	
MW-412D	SR	3/2/2016	14:22	23.48	949.64	926.16	
MW-413D	SR	3/2/2016	11:25	27.15	970.13	942.98	
MW-414D	SR	3/2/2016	11:28	28.85	971.91	943.06	
MW-416D	SR	3/2/2016	11:36	22.85	965.84	942.99	
MW-417D	SR	3/2/2016	11:42	21.93	964.96	943.03	
MW-418D	SR	3/2/2016	11:47	22.04	965.06	943.02	
MW-419D	SR	3/2/2016	13:28	24.35	967.40	943.05	
MW-419M	MB	3/2/2016	13:27	24.96	967.50	942.54	
MW-420D	SR	3/2/2016	13:20	22.20	965.26	943.06	
MW-420M	MB	3/2/2016	13:25	21.93	964.85	942.92	
MW-421D	SR	3/2/2016	13:31	15.43	958.50	943.07	
MW-422D	SR	3/2/2016	12:15	34.68	980.98	946.30	
MW-424D	SR	3/2/2016	12:18	33.55	979.74	946.19	
MW-432D	SR	3/2/2016	14:26	31.97	974.50	942.53	
MW-432M	MB	3/2/2016	14:28	18.87	974.90	956.03	
MW-433D	SR	3/2/2016	14:30	27.28	970.43	943.15	
MW-434D	SR	3/2/2016	14:38	22.21	965.33	943.12	
MW-435D	SR	3/2/2016	14:35	12.95	955.91	942.96	
MW-436D	SR	3/2/2016	14:33	19.26	962.37	943.11	
MW-437D	SR	3/2/2016	14:48	7.57	948.38	940.81	
MW-438D	SR	3/2/2016	15:06	29.51	972.59	943.08	
MW-439D	SR	3/2/2016	14:42	12.35	955.58	943.23	
MW-440D	SR	3/2/2016	14:44		936.70		artesian
MW-441D	SR	3/2/2016	15:00	31.21	974.38	943.17	
MW-442D	SR	3/2/2016	15:30	32.60	975.68	943.08	
MW-443D	SR	3/2/2016	15:21	36.71	979.72	943.01	
MW-444D	SR	3/2/2016	14:23	3.25	934.18	930.93	
MW-447D	SR	3/2/2016	15:17	38.23	965.84	927.61	
MW-448D	SR	3/2/2016	14:55	8.80	935.38	926.58	
MW-449D	SR	3/2/2016	15:10	31.02	970.44	939.42	
MW-450D	SR	3/2/2016	14:09	15.17	910.51	895.34	
MW-451D	SR	3/2/2016	15:02	24.80	967.32	942.52	
MW-453D	SR	3/2/2016	15:15		923.25		artesian

Attachment B
Data Usability Summary Reports

Data Usability Summary Report (DUSR)
Vandalia, Ohio - Quarterly Monitoring
Analytical Laboratory: TestAmerica, Inc. - North Canton, OH
Sample Delivery Group # 240-60328-1

Analytical results for the project samples were reviewed to evaluate the data usability. Data was assessed in accordance with guidance from the following Federal and/or State guidance documents:

- USEPA National Functional Guidelines for Organic Data Review (EPA 540-R-014-002)

and method protocol criteria where applicable as prescribed by "Test Methods for Evaluating Solid Waste", SW846, Update III, 1996, or Standard Methods for the Examination of Water and Wastewater, Eds 18-20.

This DUSR pertains to the following samples:

Sample ID	Sample ID	Sample ID
415S-012616-1445	759-012616-1240	4184-012616-0001
420D-012616-1245	775-012616-1135	4184-012616-0002
420M-012616-1130	776-012616-1620	3114-012616-0001
740-012616-1400	800-012616-1520	3114-012616-0002

Project Samples were analyzed according to the following analytical methods

	Parameter	Analytical Method	Holding Time Criteria
1.	VOCs	EPA 8260B	14 days

The following items/criteria applicable to the analysis of project samples and associated QA/QC procedures were reviewed

- Holding Times
- Project-specific Reporting Limits
- GC/MS Instrument Performance Check
- Initial Calibration Procedures
- Continuing Calibration Procedures
- Blank Sample Analysis
- System Monitoring Compound Recoveries
- Laboratory Control Samples, Matrix Spike/Matrix Spike Duplicate Recoverie
- Internal Standard Recoveries
- Field Duplicate Sample Analysis
- Target Compound Identification
- Sample Data Reporting Format
- Data Qualifiers
- Summary

Preservation and Holding Times

Maximum allowable holding times, measured from the time of sample collection to the time of sample preparation or analysis, were met for each project sample analyzed as part of this sample delivery group, with the following exception(s):

During the analysis of VOCs (EPA Method 8260B) preservation and/or technical holding times were exceeded for project samples shown below. Sample results should be qualified according to the actions specified in the following table:

Lab ID	Sample ID	Matrix	Action
VM567641_00013	RESTEK Reagent	STD	See Action #1 Below
VM567641S_00007	RESTEK Reagent	STD	See Action #1 Below
VM567642_00015	RESTEK Reagent	STD	See Action #1 Below
VM567642S_00005	RESTEK Reagent	STD	See Action #1 Below
VM567643_00020	RESTEK Reagent	STD	See Action #1 Below
VM567645S_00016	RESTEK Reagent	STD	See Action #2 Below
VM568720_00009	RESTEK Reagent	STD	See Action #2 Below
VM569724_00003	RESTEK Reagent	STD	See Action #3 Below

Action #1

This standard expired "February 2016". The lab listed the expiration date as 2/29/16, which is supported by the RESTEK website. As samples were analyzed 2/1/16 and 2/2/16, the reviewer concedes with the laboratory listed date and the RESTEK website for expiration of the end of the month rather than the beginning. No action required.

Action #2

This standard expired "November 30, 2015". This standard was used to prepare the ICV and ICAL run on 11/20/15. No action required.

Action #3

This standard expired "January 31, 2016". This standard was used to prepare the ICAL run on 11/20/15. No action is required.

Project-specific Reporting Limits

The reporting limits for the samples within this Sample Delivery Group (SDG) met or exceeded the minimum reporting limit requirements specified by the Project-specific Quality Assurance Project Plan (QAPP) with the following exception(s):

During the analysis of VOCs (EPA Method 8260B) the reporting limits were greater than the Project-specific Quality Assurance Project Plan (QAPP) criteria. The following project sample data as specified in the following table were affected:

Target Analyte(s)	QAPP RL	Sample ID	Lab Package RL	Reason	Action
All VOCs	1x	420M-012616-1130	25x	Dilution req'd by sample matrix	No further action
All VOCs	1x	420D-012616-1245	~22.2x	Dilution req'd by sample matrix	No further action
All VOCs	1x	759-012616-1240	~1.43x	Dilution req'd by sample matrix	No further action

Action:

No further action - another target analyte was detected within the sample matrix that required dilution therefore no further action is necessary.
Request Reanalysis - Contact lab to inquire on the reason for the higher reporting limit and whether the sample can be resampled within the maximum allowable holding time.

GC/MS Instrument Performance Check

GC/MS instrument performance checks for the instruments used in the analysis of project samples fell within method specific criteria without exception. No qualification of the data is recommended.

Initial Calibration Procedures

Initial instrument calibration procedures for the analysis of project samples were consistent with the guidelines prescribed by EPA protocols, with the following exception(s):

During the analysis of VOCs (SW846 8260B), the initial calibration standards for the following target compound(s) exhibited a percent relative standard deviation (%RSD) greater than the associated limit, or a relative retention factor (RRF) less than the minimum RRF limit:

Inst.	Date / Time	Target Analyte(s)	%RSD	RRF	Affected Sample(s)	Corrective Action
A3UX16	11/20/15 17:08	Bromodichloromethane	7.10	RRF < 0.3	All Project Samples	J+/R
		cis-1,3-Dichloropropene	7.70	RRF < 0.3	All Project Samples	J+/R
		Dibromochloromethane	9.70	RRF < 0.2	All Project Samples	J+/R
		1,2-Dibromoethane	5.70	RRF < 0.2	All Project Samples	J+/R

Continuing Calibration Procedures

Continuing calibration verification (CCV) procedures for the analysis of project samples were consistent with the guidelines prescribed by EPA protocols, with the following exception(s):

During the analysis of VOCs (SW846 8260B), the continuing calibration verification (CCV) standards for the following target compound(s) exhibited a percent drift (%D) greater than the acceptance criteria of 25% and/or a RRF less than 0.05:

Inst.	Date / Time	Target Analyte(s)	%D	RRF	Affected Sample(s)	Corrective Action
A3UX16	11/20/15 19:48	Acrolein	87.10	0.02	None, not target analyte	None.
		Bromodichloromethane	0.60	RRF < 0.3	None, qualified by ICAL	None.
A3UX16	02/01/16 09:46	Acrolein	85.60	0.02	None, not target analyte	None.
A3UX16	02/02/16 09:24	Acrolein	78.70	0.02	None, not target analyte	None.
		Bromodichloromethane	-0.60	RRF < 0.3	None, qualified by ICAL	None.
		1,2-Dibromoethane	-8.00	RRF < 0.2	None, qualified by ICAL	None.

Blank Sample Analysis

In accordance with cited USEPA guidelines, positive sample results should be reported unless the concentration of the compound in the project sample is less than or equal to 10 times (10X) the amount in any blank for metals and the common organic laboratory contaminants (methylene chloride, acetone, 2-butanone, cyclohexane, and phthalate esters), or 5 times (5X) the amount for other target compounds. Target compounds were not detected in associated blank samples (trip, equipment, method) prepared and analyzed concurrently with the project samples, with the following exception(s):

Blank	Target Analyte(s)	Concn.	Affected Sample(s)	Qualifiers
3114-012616-0001 Equipment Blank	2-Butanone (MEK)	1.1 ug/L	None, all samples ND.	None.
4184-012616-0002 Equipment Blank	2-Butanone (MEK)	0.9 ug/L	None, all samples ND.	None.

System Monitoring Compound Recoveries

System monitoring/surrogate compounds are added to each sample prior to analysis of organic parameters to confirm the efficiency of the sample preparation procedure. The calculated recovery for each surrogate compound was evaluated to confirm the accuracy of the reported results. The calculated recovery of these compounds fell within the laboratory specific quality control criteria. No qualification of the data is recommended.

Laboratory Control Samples, Matrix Spike/Matrix Spike Duplicate Recoveries

Analytical precision and accuracy was evaluated based on the laboratory control and matrix spike sample analyses performed concurrently with the project samples. For matrix spike samples, after the addition of a known amount of each target analyte to the sample matrix, the sample was analyzed to confirm the ability to identify these compounds within the sample matrix. For LCS analyses, after the addition of a known amount of each target analyte into laboratory reagent water, the sample was analyzed to confirm the ability of the analytical system to accurately quantif the compounds. The reported recovery of MS/MSD and LCS analyses fell within the laboratory QA acceptance criteria. No qualification of the data is recommended.

Internal Standard Recoveries

Internal Standard compounds were added to each sample matrix prior to the analysis of organic parameters to quantify the amount of the target compounds detected within each sample. The calculated response of each IS compound fell within the QA/QC criteria of +100% and – 50% of the corresponding CCV standard. No qualification of the data is recommended.

Field Duplicate Sample Analysis

The overall variability attributable to the sampling procedure, sample matrix, and laboratory procedures, was evaluated by assessing the relative percent difference (RPD) data from field duplicate samples. All calculated RPD values were within matrix specific data quality objectives, with the exception of results qualified "J" as shown in the table(s) below:

	Original Sample ID.	FD Sample ID.		Flag Original and FD
Target Analyte(s)	415S-012616-1445	4184-012616-0001	%RPD	sample results with:
cis-1,2-Dichloroethene	1 ug/L	1 ug/L	NA	None, Abs. Diff < RL
Trichloroethene	0.74 ug/L	0.69 ug/L	NA	None, Abs. Diff < RL

Action:

If the sample matrix is solid and the %RPD is greater than 50%, the original sample results are qualified "J". If the sample matrix is water or air and the %RPD is greater than 35%, the original sample results are qualified "J".

Target Compound Identification

GC/MS qualitative analysis for organic parameters was performed to remove mis-identifications of the target compounds. The relative retention times (RRT) of all reported target compounds were within +/- 0.06 RRT units of the associated calibration standard RRT, and all ions present in the reference standard spectrum at a relative intensity greater than 10 percent were also present in the sample spectrum. No qualification of the data is recommended.

Sample Data Reporting Format

The sample data are presented using USEPA Contract Laboratory Protocol (CLP) format or equivalent. The data package has been reviewed fo completeness and found to contain each required sample result and associated QA/QC report form. The reporting format is complete and compliant with the objectives of the project. No qualification of the data is recommended.

Data Qualifiers

Samples that contain results between the MDL and RL were flagged as estimated, "J", by the laboratory. The data user should be aware that there is a possibility of false positive or mis-identification at the quantitation levels. The laboratory also qualified results when target analytes were detected in the associated method/preparation blank sample. Based on a spot check of the data qualifiers used, these flags appeared to be applied to the reported results in accordance with EPA guidance.

Summary

The results presented in each report were found to be compliant with the data quality objectives for the project and usable. Based on our review, the usability of the data is 100%, with the few exceptions noted above.

Date: 3/15/2016

Data Usability Summary Report (DUSR)
Vandalia, Ohio - Quarterly Monitoring
Analytical Laboratory: TestAmerica, Inc. - North Canton, OH
Sample Delivery Group # 240-60391-1

Analytical results for the project samples were reviewed to evaluate the data usability. Data was assessed in accordance with guidance from the following Federal and/or State guidance documents:

- USEPA National Functional Guidelines for Organic Data Review (EPA 540-R-014-002)

and method protocol criteria where applicable as prescribed by "Test Methods for Evaluating Solid Waste", SW846, Update III, 1996, or Standard Methods for the Examination of Water and Wastewater, Eds 18-20.

This DUSR pertains to the following samples:

Sample ID	Sample ID	Sample ID
605-012916-1445	411D-012916-1125	3114-012916-0001
402D-012916-1525	412D-012916-1135	3114-012916-0002
424D-012916-1550	4184-012916-0002	4184-012916-0001

Project Samples were analyzed according to the following analytical methods

	Parameter	Analytical Method	Holding Time Criteria
1.	VOCs	EPA 8260B	14 days

The following items/criteria applicable to the analysis of project samples and associated QA/QC procedures were reviewed

- Holding Times
- Project-specific Reporting Limits
- GC/MS Instrument Performance Check
- Initial Calibration Procedures
- Continuing Calibration Procedures
- Blank Sample Analysis
- System Monitoring Compound Recoveries
- Laboratory Control Samples, Matrix Spike/Matrix Spike Duplicate Recoveries
- Internal Standard Recoveries
- Field Duplicate Sample Analysis
- Target Compound Identification
- Sample Data Reporting Format
- Data Qualifiers
- Summary

Preservation and Holding Times

Maximum allowable holding times, measured from the time of sample collection to the time of sample preparation or analysis, were met for each project sample analyzed as part of this sample delivery group, with the following exception(s):

During the analysis of VOCs (EPA Method 8260B) preservation and/or technical holding times were exceeded for project samples shown below. Sample results should be qualified according to the actions specified in the following table:

Lab ID	Sample ID	Matrix	Action
VM567641_00013	RESTEK Reagent	STD	See Action #1 Below
VM567642_00015	RESTEK Reagent	STD	See Action #1 Below
VM567642S_00005	RESTEK Reagent	STD	See Action #1 Below
VM567643_00020	RESTEK Reagent	STD	See Action #1 Below
VM569724_00003	RESTEK Reagent	STD	See Action #2 Below

Action #1

This standard expired "February 2016". The lab listed the expiration date as 2/29/16, which is supported by the RESTEK website. As samples were analyzed 2/1/16 and 2/2/16, the reviewer concedes with the laboratory listed date and the RESTEK website for expiration of the end of the month rather than the beginning. No action required.

Action #2

This standard expired "January 31, 2016". This standard was used to prepare the ICAL run on 11/20/15. No action is required.

Project-specific Reporting Limits

The reporting limits for the samples within this Sample Delivery Group (SDG) met or exceeded the minimum reporting limit requirements specified by the Project-specific Quality Assurance Project Plan (QAPP) with the following exception(s):

During the analysis of VOCs (EPA Method 8260B) the reporting limits were greater than the Project-specific Quality Assurance Project Plan (QAPP) criteria. The following project sample data as specified in the following table were affected:

Target Analyte(s)	QAPP RL	Sample ID	Lab Package RL	Reason	Action
All VOCs	1x	411D-012916-1125	20x	Dilution req'd by sample matrix	No further action
All VOCs	1x	412D-012916-1135	10x	Dilution req'd by sample matrix	No further action
All VOCs	1x	3114-012916-0001	8x	Dilution req'd by sample matrix	No further action
All VOCs	1x	424D-012916-1550	~3.33x	Dilution req'd by sample matrix	No further action

Action:

No further action - another target analyte was detected within the sample matrix that required dilution therefore no further action is necessary. Request Reanalysis - Contact lab to inquire on the reason for the higher reporting limit and whether the sample can be resampled within the maximum allowable holding time.

GC/MS Instrument Performance Check

GC/MS instrument performance checks for the instruments used in the analysis of project samples fell within method specific criteria without exception. No qualification of the data is recommended.

Initial Calibration Procedures

Initial instrument calibration procedures for the analysis of project samples were consistent with the guidelines prescribed by EPA protocols, with the following exception(s):

During the analysis of VOCs (SW846 8260B), the initial calibration standards for the following target compound(s) exhibited a percent relative standard deviation (%RSD) greater than the associated limit, or a relative retention factor (RRF) less than the minimum RRF limit:

Inst.	Date / Time	Target Analyte(s)	%RSD	RRF	Affected Sample(s)	Corrective Action
A3UX11	01/29/16 12:13	All VOCs	Within	Within	None, all within limits.	None.
A3UX17	01/26/16 12:23	Acetone	53.00	0.09	4184-012916-0001	J Flag
		Bromodichloromethane	8.10	RRF < 0.3	4184-0001, 0002	R Flag
		cis-1,3-Dichloropropene	14.70	RRF < 0.3	4184-0001, 0002	R Flag

Continuing Calibration Procedures

Continuing calibration verification (CCV) procedures for the analysis of project samples were consistent with the guidelines prescribed by EPA protocols, with the following exception(s):

During the analysis of VOCs (SW846 8260B), the continuing calibration verification (CCV) standards for the following target compound(s) exhibited a percent drift (%D) greater than the associated limit, or a relative retention factor (RRF) less than the minimum RRF limit:

Inst.	Date / Time	Target Analyte(s)	%D	RRF	Affected Sample(s)	Corrective Action
A3UX17	02/03/16 11:01	Chloroethane	-25.80	0.06	4184-0001, 0002	J/UJ
A3UX17	01/26/16 14:36	Bromodichloromethane	-1.80	RRF < 0.3	Already qualified by ICAL.	R Flag
A3UX17	02/03/16 11:01	Bromodichloromethane	-9.60	RRF < 0.3	Already qualified by ICAL.	R Flag

Blank Sample Analysis

In accordance with cited USEPA guidelines, positive sample results should be reported unless the concentration of the compound in the project sample is less than or equal to 10 times (10X) the amount in any blank for metals and the common organic laboratory contaminants (methylene chloride, acetone, 2-butanone, cyclohexane, and phthalate esters), or 5 times (5X) the amount for other target compounds. Target compounds were not detected in associated blank samples (trip, equipment, method) prepared and analyzed concurrently with the project samples, with the following exception(s):

Blank	Target Analyte(s)	Concn.	Affected Sample(s)	Qualifiers
MB 240-216247/6 216247	Methylene chloride	0.405 ug/L	None, all samples ND.	None.
3114-012916-0002 Equipment Blank	Acetone 2-Butanone (MEK)	2.5 ug/L 1.7 ug/L	424D, 412D, Dup, 411D None, all samples ND.	U
4184-012916-0001 Equipment Blank	Acetone	1.1 ug/L	424D, 412D, Dup, 411D	U

System Monitoring Compound Recoveries

System monitoring/surrogate compounds are added to each sample prior to analysis of organic parameters to confirm the efficiency of the sample preparation procedure. The calculated recovery for each surrogate compound was evaluated to confirm the accuracy of the reported results. The calculated recovery of these compounds fell within the laboratory specific quality control criteria. No qualification of the data is recommended.

Laboratory Control Samples, Matrix Spike/Matrix Spike Duplicate Recoveries

Analytical precision and accuracy was evaluated based on the laboratory control and matrix spike sample analyses performed concurrently with the project samples. For matrix spike samples, after the addition of a known amount of each target analyte to the sample matrix, the sample was analyzed to confirm the ability to identify these compounds within the sample matrix. For LCS analyses, after the addition of a known amount of each target analyte into laboratory reagent water, the sample was analyzed to confirm the ability of the analytical system to accurately quantify the compounds. The reported recovery of MS/MSD and LCS analyses fell within the laboratory QA acceptance criteria, with the following exception(s):

LCS ID / Project Sample MS	Type	Target Analyte(s)	%R Criteria	%R	%RPD	Affected Sample(s)
411D-012916-1125	MS	All VOCs	Various	Within	Within	None, all within limits.

Internal Standard Recoveries

Internal Standard compounds were added to each sample matrix prior to the analysis of organic parameters to quantify the amount of the target compounds detected within each sample. The calculated response of each IS compound fell within the QA/QC criteria of +100% and – 50% of the corresponding CCV standard. No qualification of the data is recommended.

Field Duplicate Sample Analysis

The overall variability attributable to the sampling procedure, sample matrix, and laboratory procedures, was evaluated by assessing the relative percent difference (RPD) data from field duplicate samples. All calculated RPD values were within matrix specific data quality objectives, with the exception of results qualified "J" as shown in the table(s) below:

	Original Sample ID.	**FD Sample ID.**		**Flag Original and FD**
Target Analyte(s)	412D-012916-1135	3114-012916-0001	**%RPD**	**sample results with:**
cis-1,2-Dichloroethene	13 ug/L	13 ug/L	NA	None, Abs. Diff < RL
trans-1,2-Dichloroethene	3.8 J ug/L	3.2 J ug/L	NA	None, Abs. Diff < RL
Acetone	13 J ug/L	11 J ug/L	NA	None, Abs. Diff < RL
Trichloroethene	220 ug/L	210 ug/L	5%	

Action:

If the sample matrix is solid and the %RPD is greater than 50%, the original sample results are qualified "J". If the sample matrix is water or air and the %RPD is greater than 35%, the original sample results are qualified "J".

Target Compound Identification

GC/MS qualitative analysis for organic parameters was performed to remove mis-identifications of the target compounds. The relative retention times (RRT) of all reported target compounds were within +/- 0.06 RRT units of the associated calibration standard RRT, and all ions present in the reference standard spectrum at a relative intensity greater than 10 percent were also present in the sample spectrum. No qualification of the data is recommended.

Sample Data Reporting Format

The sample data are presented using USEPA Contract Laboratory Protocol (CLP) format or equivalent. The data package has been reviewed for completeness and found to contain each required sample result and associated QA/QC report form. The reporting format is complete and compliant with the objectives of the project. No qualification of the data is recommended.

Data Qualifiers

Samples that contain results between the MDL and RL were flagged as estimated, "J", by the laboratory. The data user should be aware that there is a possibility of false positive or mis-identification at the quantitation levels. The laboratory also qualified results when target analytes were detected in the associated method/preparation blank sample. Based on a spot check of the data qualifiers used, these flags appeared to be applied to the reported results in accordance with EPA guidance.

Summary

The results presented in each report were found to be compliant with the data quality objectives for the project and usable. Based on our review, the usability of the data is 100%, with the few exceptions noted above.

Date: 3/15/2016

Data Usability Summary Report (DUSR)
Vandalia MAHLE
Analytical Laboratory: TestAmerica, Inc. - North Canton, OH
Sample Delivery Group # 240-60393_59968_60312

Analytical results for the project samples were reviewed to evaluate the data usability. Data was assessed in accordance with guidance from the following Federal and/or State guidance documents:

- USEPA National Functional Guidelines for Organic Data Review (EPA 540-R-014-002)
  USEPA National Functional Guidelines for Inorganic Data Review (EPA 540-R-013-001)

and method protocol criteria where applicable as prescribed by "Test Methods for Evaluating Solid Waste", SW846, Update III, 1996, or Standard Methods for the Examination of Water and Wastewater, Eds 18-20.

This DUSR pertains to the following samples:

Sample ID	Sample ID	Sample ID
B005-011416-1050	730-012716-1145	4184-012816-0002
4184-011416-0001	413D-012716-1350	
SW01-011416-1435	3114-012716-0001	
SW04-011416-1450	4184-012716-0001	
B006-011416-1055	446S-012716-1115	
C001-011416-1115	301S-012716-1410	
D001-011416-1200	515-012716-1555	
E001-011416-1130	4184-012716-0002	
E002-011416-1145	4184-012816-0001	
G004-011416-1325	445S-012816-1150	
G006-011416-1350	741-012816-1300	
F001-011416-1415	425S-012816-1430	
426S-012716-1030	103-012816-1550	

Project Samples were analyzed according to the following analytical methods:

	Parameter	Analytical Method	Holding Time Criteria
1.	VOCs	EPA 8260B/624	14 days

The following items/criteria applicable to the analysis of project samples and associated QA/QC procedures were reviewed.

- Holding Times
- Project-specific Reporting Limits
- GC/MS Instrument Performance Check
- Initial Calibration Procedures
- Continuing Calibration Procedures
- Blank Sample Analysis
- System Monitoring Compound Recoveries
- Laboratory Control Samples, Matrix Spike/Matrix Spike Duplicate Recoveries
- Internal Standard Recoveries
- Target Compound Identification
- Sample Data Reporting Format
- Data Qualifiers
- Summary

Preservation and Holding Times

Maximum allowable holding times, measured from the time of sample collection to the time of sample preparation or analysis, were met for each project sample analyzed as part of this sample delivery group, with the following exception(s):

During the analysis of VOCs (EPA Method 8260B) preservation and/or technical holding times were exceeded for project samples shown below. Sample results should be qualified according to the actions specified in the following table:

Lab ID	Sample ID	Matrix	Action
240-59968-8	G006-011416-1350	W	See Action #1 Below

Action #1
Positive results are qualified "J", estimated and non-detected analytes as "UJ", estimated reporting limit. The following sample was submitted for volatile analysis with insufficient preservation (pH>2)

Project-specific Reporting Limits

The reporting limits for the samples within this Sample Delivery Group (SDG) met or exceeded the minimum reporting limit requirements specified by the Project-specific Quality Assurance Project Plan (QAPP) with the following exception(s):

During the analysis of VOCs (EPA Method 8260B) the reporting limits were greater than the Project-specific Quality Assurance Project Plan (QAPP) criteria. The following project sample data as specified in the following table were affected:

Target Analyte(s)	QAPP RL	Sample ID	Lab Package RL	Reason	Action
Various Analytes	1x	C001-011416-1115	1.43x	Dilution req'd by sample matrix	No further action
Various Analytes	1x	E001-011416-1130	1.43x	Dilution req'd by sample matrix	No further action
Various Analytes	1x	SW04-011416-1450	2x	Dilution req'd by sample matrix	No further action
Various Analytes	1x	D001-011416-1200	2.5x	Dilution req'd by sample matrix	No further action
Various Analytes	1x	425S-012816-1430	20x	Dilution req'd by sample matrix	No further action

Action:
No further action - another target analyte was detected within the sample matrix that required dilution therefore no further action is necessary.
Request Reanalysis - Contact lab to inquire on the reason for the higher reporting limit and whether the sample can be resampled within the maximum allowable holding time.

GC/MS Instrument Performance Check

GC/MS instrument performance checks for the instruments used in the analysis of project samples fell within method specific criteria without exception. No qualification of the data is recommended.

Initial Calibration Procedures

Initial instrument calibration procedures for the analysis of project samples were consistent with the guidelines prescribed by EPA protocols. No Qualification of the data is recommended.

Continuing Calibration Procedures

Continuing calibration verification (CCV) procedures for the analysis of project samples were consistent with the guidelines prescribed by EPA protocols. No Qualification of the data is recommended.

Blank Sample Analysis

In accordance with cited USEPA guidelines, positive sample results should be reported unless the concentration of the compound in the project sample is less than or equal to 10 times (10X) the amount in any blank for metals and the common organic laboratory contaminants (methylene chloride, acetone, 2-butanone, cyclohexane, and phthalate esters), or 5 times (5X) the amount for other target compounds. Target compounds were not detected in associated blank samples (trip, equipment, method) prepared and analyzed concurrently with the project samples, with the following exception(s):

Blank	Target Analyte(s)	Concn.	Affected Sample(s)	Qualifiers
EB (3114-012716-0001)	Acetone	1.50 ug/L	None, Sample ND	
	2-Butanone (MEK)	1.30 ug/L	4184-012716-0002	U
TB (4184-011416-0001)	Acetone	70.00 ug/L	SW04-011416-1450	U
	Methylene chloride	0.66 ug/L	None, Sample ND	
EB (4184-012716-0002)	2-Butanone (MEK)	0.88 ug/L	3114-012716-0001	U
TB (4184-012816-0001)	Acetone	2.30 ug/L	4184-012816-0002	U
EB (4184-012816-0002)	Acetone	2.80 ug/L	4184-012816-0001	U
	2-Butanone (MEK)	1.60 ug/L	None, Sample ND	
MB 240-216247/6	Methylene chloride	0.405 ug/L	None, Sample ND	

System Monitoring Compound Recoveries

System monitoring/surrogate compounds are added to each sample prior to analysis of organic parameters to confirm the efficiency of the sample preparation procedure. The calculated recovery for each surrogate compound was evaluated to confirm the accuracy of the reported results. The calculated recovery of these compounds fell within the laboratory specific quality control criteria. No qualification of the data is recommended.

Laboratory Control Samples, Matrix Spike/Matrix Spike Duplicate Recoveries

Analytical precision and accuracy was evaluated based on the laboratory control and matrix spike sample analyses performed concurrently with the project samples. For matrix spike samples, after the addition of a known amount of each target analyte to the sample matrix, the sample was analyzed to confirm the ability to identify these compounds within the sample matrix. For LCS analyses, after the addition of a known amount of each target analyte into laboratory reagent water, the sample was analyzed to confirm the ability of the analytical system to accurately quantify the compounds. The reported recovery of MS/MSD and LCS analyses fell within the laboratory QA acceptance criteria. No qualification of the data is recommended.

Internal Standard Recoveries

Internal Standard compounds were added to each sample matrix prior to the analysis of organic parameters to quantify the amount of the target compounds detected within each sample. The calculated response of each IS compound fell within the QA/QC criteria of +100% and – 50% of the corresponding CCV standard. No qualification of the data is recommended.

Target Compound Identification

GC/MS qualitative analysis for organic parameters was performed to remove mis-identifications of the target compounds. The relative retention times (RRT) of all reported target compounds were within +/- 0.06 RRT units of the associated calibration standard RRT, and all ions present in the reference standard spectrum at a relative intensity greater than 10 percent were also present in the sample spectrum. No qualification of the data is recommended.

Sample Data Reporting Format

The sample data are presented using USEPA Contract Laboratory Protocol (CLP) format or equivalent. The data package has been reviewed for completeness and found to contain each required sample result and associated QA/QC report form. The reporting format is complete and compliant with the objectives of the project. No qualification of the data is recommended.

Data Qualifiers

Samples that contain results between the MDL and RL were flagged as estimated, "J", by the laboratory. The data user should be aware that there is a possibility of false positive or mis-identification at the quantitation levels. The laboratory also qualified results when target analytes were detected in the associated method/preparation blank sample. Based on a spot check of the data qualifiers used, these flags appeared to be applied to the reported results in accordance with EPA guidance.

Summary

The results presented in each report were found to be compliant with the data quality objectives for the project and usable. Based on our review, the usability of the data is 100%, with the few exceptions noted above.

Data Usability Summary Report (DUSR)
Vandalia, Ohio - Quarterly Monitoring
Analytical Laboratory: TestAmerica, Inc. - North Canton, OH
Sample Delivery Group # 240-60448-1

Analytical results for the project samples were reviewed to evaluate the data usability. Data was assessed in accordance with guidance from the following Federal and/or State guidance documents:

- USEPA National Functional Guidelines for Organic Data Review (EPA 540-R-014-002)

and method protocol criteria where applicable as prescribed by "Test Methods for Evaluating Solid Waste", SW846, Update III, 1996, or Standard Methods for the Examination of Water and Wastewater, Eds 18-20.

This DUSR pertains to the following samples:

Sample ID	Sample ID	Sample ID
607-020116-1620	731-020116-1345	4184-020116-0001
717-020116-1440	734-020116-1505	3114-020116-0001
725-020116-1355	743-020116-1235	3114-020116-0002
729-020116-1255	746-020116-1550	

Project Samples were analyzed according to the following analytical methods:

	Parameter	Analytical Method	Holding Time Criteria
1.	VOCs	EPA 8260B	14 days

The following items/criteria applicable to the analysis of project samples and associated QA/QC procedures were reviewed.

- Holding Times
- Project-specific Reporting Limits
- GC/MS Instrument Performance Check
- Initial Calibration Procedures
- Continuing Calibration Procedures
- Blank Sample Analysis
- System Monitoring Compound Recoveries
- Laboratory Control Samples, Matrix Spike/Matrix Spike Duplicate Recoveries
- Internal Standard Recoveries
- Target Compound Identification
- Sample Data Reporting Format
- Data Qualifiers
- Summary

Preservation and Holding Times

Maximum allowable holding times, measured from the time of sample collection to the time of sample preparation or analysis, were met for each project sample analyzed as part of this sample delivery group, with the following exception(s):

During the analysis of VOCs (EPA Method 8260B) preservation and/or technical holding times were exceeded for project samples shown below. Sample results should be qualified according to the actions specified in the following table:

Lab ID	Sample ID	Matrix	Action
240-60448-11	4184-020116-0001	WG	See Action #1 Below
240-60448-7	743-020116-1235	WG	See Action #1 Below
VM567641_00013	RESTEK Reagent	STD	See Action #2 Below
VM567641S_00007	RESTEK Reagent	STD	See Action #2 Below
VM567642_00015	RESTEK Reagent	STD	See Action #2 Below
VM567642S_00005	RESTEK Reagent	STD	See Action #2 Below
VM567643_00020	RESTEK Reagent	STD	See Action #2 Below
VM567645S_00016	RESTEK Reagent	STD	See Action #3 Below
VM568720_00009	RESTEK Reagent	STD	See Action #3 Below
VM569724_00003	RESTEK Reagent	STD	See Action #4 Below

Action #1

Surrogates recovered low for the initial run for these samples, so they were rerun out of hold. The surrogates for the reanalyses were within limits, but due to more strict qualifcation on out-of-hold data, the initial runs were kept. Out of hold data is non-reportable, and qualifed "J/R".

Action #2

This standard expired "February 2016". The lab listed the expiration date as 2/29/16, which is supported by the RESTEK website. As samples were analyzed 2/1/16 and 2/2/16, the reviewer concedes with the laboratory listed date and the RESTEK website for expiration of the end of the month rather than the beginning. No action required.

Action #3

This standard expired "November 30, 2015". This standard was used to prepare the ICV and ICAL run on 11/20/15. No action required.

Action #4

This standard expired "January 31, 2016". This standard was used to prepare the ICAL run on 11/20/15. No action is required.

Project-specific Reporting Limits

The reporting limits for the samples within this Sample Delivery Group (SDG) met or exceeded the minimum reporting limit requirements specified by the Project-specific Quality Assurance Project Plan (QAPP). No qualification of the data is recommended.

GC/MS Instrument Performance Check

GC/MS instrument performance checks for the instruments used in the analysis of project samples fell within method specific criteria without exception. No qualification of the data is recommended.

Initial Calibration Procedures

Initial instrument calibration procedures for the analysis of project samples were consistent with the guidelines prescribed by EPA protocols, with the following exception(s):

During the analysis of VOCs (SW846 8260B), the initial calibration standards for the following target compound(s) exhibited a percent relative standard deviation (%RSD) greater than the associated limit, or a relative retention factor (RRF) less than the minimum RRF limit:

Inst.	Date / Time	Target Analyte(s)	%RSD	RRF	Affected Sample(s)	Corrective Action
A3UX10	12/10/15 13:55	All VOCs	NA	NA	Samples out of hold.	None. Applicable data not reported.
A3UX16	11/20/15 17:08	Bromodichloromethane	7.10	RRF < 0.3	All Project Samples	J+/R
		cis-1,3-Dichloropropene	7.70	RRF < 0.3	All Project Samples	J+/R
		Dibromochloromethane	9.70	RRF < 0.2	All Project Samples	J+/R
		1,2-Dibromoethane	5.70	RRF < 0.2	All Project Samples	J+/R

Continuing Calibration Procedures

Continuing calibration verification (CCV) procedures for the analysis of project samples were consistent with the guidelines prescribed by EPA protocols, with the following exception(s):

During the analysis of VOCs (SW846 8260B), the continuing calibration verification (CCV) standards for the following target compound(s) exhibited a percent drift (%D) greater than the associated limit, or a relative retention factor (RRF) less than the minimum RRF limit:

Inst.	Date / Time	Target Analyte(s)	%D	RRF	Affected Sample(s)	Corrective Action
A3UX16	11/20/15 19:48	Acrolein	87.10	0.02	None, not target analyte	None.
		Bromodichloromethane	0.60	RRF < 0.3	None, qualified by ICAL	None.
A3UX16	02/05/16 10:23	Acrolein	92.10	0.02	None, not target analyte	None.
		1,1-Dichloroethene	35.00	0.31	All Project Samples	J/UJ
		1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	45.40	0.27	All Project Samples	J/UJ
		Acetone	41.00	0.06	All Project Samples	J/UJ
		Iodomethane	33.00	0.51	None, not target analyte	None.
		Carbon disulfide	39.00	0.99	All Project Samples	J/UJ
		Vinyl acetate	-26.70	0.20	None, not target analyte	None.
		1,2-Dichloroethane	-20.90	0.23	All Project Samples	J/UJ
		trans-1,4-Dichloro-4-butene	-33.80	0.06	None, not target analyte	None.
		Bromodichloromethane	-4.50	RRF < 0.3	None, qualified by ICAL	None.

Blank Sample Analysis

In accordance with cited USEPA guidelines, positive sample results should be reported unless the concentration of the compound in the project sample is less than or equal to 10 times (10X) the amount in any blank for metals and the common organic laboratory contaminants (methylene chloride, acetone, 2-butanone, cyclohexane, and phthalate esters), or 5 times (5X) the amount for other target compounds. Target compounds were not detected in associated blank samples (trip, equipment, method) prepared and analyzed concurrently with the project samples, with the following exception(s):

Blank	Target Analyte(s)	Concn.	Affected Sample(s)	Qualifiers
3114-020116-0001	Acetone	1.3 ug/L	None, all samples ND.	None.
Equipment Blank	2-Butanone (MEK)	1.1 ug/L	None, all samples ND.	None.
4184-020116-0001	Acetone	1.6 ug/L	None, all samples ND.	None.
Equipment Blank	2-Butanone (MEK)	1.0 ug/L	None, all samples ND.	None.

System Monitoring Compound Recoveries

System monitoring/surrogate compounds are added to each sample prior to analysis of organic parameters to confirm the efficiency of the sample preparation procedure. The calculated recovery for each surrogate compound was evaluated to confirm the accuracy of the reported results. The calculated recovery of these compounds fell within the laboratory specific quality control criteria, with the following exception(s):

VOC Surrogate Percent Recovery Criteria				
Surrogate		Aqueous Matrix (%)	Solid Matrix (%)	Vapor Matrix (%)
Dibromofluoromethane	S01	- -	- -	- -
1,2-Dichloroethane-d4	S02	78 - 125	- -	- -
Toluene-d8	S03	80 - 120	- -	- -
4-Bromofluorobenzene	S04	- -	- -	- -

Project Sample ID	Matrix	S01 %R	S02 %R	S03 %R	S04 %R	Positive Results	Non Detect (ND)
743-020116-1235	WG	-	69	-	-	J-	UJ
4184-020116-0001	WG	-	-	77	-	J-	UJ

Affected Analytes

1,2-Dichloroethane-d4

Carbon tetrachloride, 1,1-Dichloropropene, Benzene, Methyl tert-Amyl Ether, 1,2-Dichloroethane, Trichloroethene, 1,2-Dichloropropane, Dibromomethane, Bromodichloromethane, 2-Chloroethylvinylether, cis-1,3-Dichloropropene, 4-Methyl-2-pentanone.

Toluene-d8

Toluene, trans-1,3-Dichloropropene, 1,1,2-Trichloroethane, Tetrachloroethene, 2-Hexanone, 1,3-Dichloropropane, Dibromochloromethane, 1,2-Dibromoethane, Chlorobenzene, Ethylbenzene, 1,1,1,2-Tetrachloroethane, m,p-Xylene, o-Xylene, Styrene, Bromoform

Laboratory Control Samples, Matrix Spike/Matrix Spike Duplicate Recoveries

Analytical precision and accuracy was evaluated based on the laboratory control and matrix spike sample analyses performed concurrently with the project samples. For matrix spike samples, after the addition of a known amount of each target analyte to the sample matrix, the sample was analyzed to confirm the ability to identify these compounds within the sample matrix. For LCS analyses, after the addition of a known amount of each target analyte into laboratory reagent water, the sample was analyzed to confirm the ability of the analytical system to accurately quantify the compounds. The reported recovery of MS/MSD and LCS analyses fell within the laboratory QA acceptance criteria, with the following exception(s):

LCS ID / Project Sample MS	Type	Target Analyte(s)	%R Criteria	%R	%RPD	Affected Sample(s)
LCS 240-216788/4	LCS	Vinyl chloride	52 - 121	122		None, all samples ND.
MS/MSD - 216788 216788	MS	All VOCs	Various	None	None	No MS/MSD run due to instrument failure.

Action:

If the LCS %R is greater than the upper acceptance limit, associated target analyte positive results are qualified "J" and non-detects should not be qualified. If the LCS %R is less than the lower acceptance limit associated target analyte positive results are qualified "J" and non-detects are qualified "R". If the MS/MSD is from a project sample and the %R greater than the upper acceptance limit, associated target analyte positive results are qualified "J" and non-detects should not be qualified. If the MS/MSD %R is >10%, but less than the lower acceptance limit, associated analyte positive results are qualified "J" and non-detects are qualified "UJ". If the MS/MSD %R is less than 10% associated target analyte positive results are qualified "J" and non-detects are qualified "R". MS/MSD qualifiers are only applied to affected samples of the same matrix. If the MS/MSD is a LAB sample do not qualify project samples.

Internal Standard Recoveries

Internal Standard compounds were added to each sample matrix prior to the analysis of organic parameters to quantify the amount of the target compounds detected within each sample. The calculated response of each IS compound fell within the QA/QC criteria of +100% and – 50% of the corresponding CCV standard. No qualification of the data is recommended.

Target Compound Identification

GC/MS qualitative analysis for organic parameters was performed to remove mis-identifications of the target compounds. The relative retention times (RRT) of all reported target compounds were within +/- 0.06 RRT units of the associated calibration standard RRT, and all ions present in the reference standard spectrum at a relative intensity greater than 10 percent were also present in the sample spectrum. No qualification of the data is recommended.

Sample Data Reporting Format

The sample data are presented using USEPA Contract Laboratory Protocol (CLP) format or equivalent. The data package has been reviewed for completeness and found to contain each required sample result and associated QA/QC report form. The reporting format is complete and compliant with the objectives of the project. No qualification of the data is recommended.

Data Qualifiers

Samples that contain results between the MDL and RL were flagged as estimated, "J", by the laboratory. The data user should be aware that there is a possibility of false positive or mis-identification at the quantitation levels. The laboratory also qualified results when target analytes were detected in the associated method/preparation blank sample. Based on a spot check of the data qualifiers used, these flags appeared to be applied to the reported results in accordance with EPA guidance.

Summary

The results presented in each report were found to be compliant with the data quality objectives for the project and usable. Based on our review, the usability of the data is 100%, with the few exceptions noted above.

Date: 3/15/2016

Data Usability Summary Report (DUSR)
Vandalia, Ohio - Quarterly Monitoring
Analytical Laboratory: TestAmerica, Inc. - North Canton, OH
Sample Delivery Group # 240-60495-1

Analytical results for the project samples were reviewed to evaluate the data usability. Data was assessed in accordance with guidance from the following Federal and/or State guidance documents:

- USEPA National Functional Guidelines for Organic Data Review (EPA 540-R-014-002)

and method protocol criteria where applicable as prescribed by "Test Methods for Evaluating Solid Waste", SW846, Update III, 1996, or Standard Methods for the Examination of Water and Wastewater, Eds 18-20.

This DUSR pertains to the following samples:

Sample ID	Sample ID	Sample ID
416D-020216-1300	784-020216-1125	3114-020216-0002
417D-020216-1120	796-020216-1240	4184-020216-0001
418D-020216-1535	810-020216-1510	4184-020216-0002
732-020216-1405	3114-020216-0001	4184-020216-0003

Project Samples were analyzed according to the following analytical methods:

	Parameter	Analytical Method	Holding Time Criteria
1.	VOCs	EPA 8260B	14 days

The following items/criteria applicable to the analysis of project samples and associated QA/QC procedures were reviewed.

- Holding Times
- Project-specific Reporting Limits
- GC/MS Instrument Performance Check
- Initial Calibration Procedures
- Continuing Calibration Procedures
- Blank Sample Analysis
- System Monitoring Compound Recoveries
- Laboratory Control Samples, Matrix Spike/Matrix Spike Duplicate Recoveries
- Internal Standard Recoveries
- Field Duplicate Sample Analysis
- Target Compound Identification
- Sample Data Reporting Format
- Data Qualifiers
- Summary

Preservation and Holding Times

Maximum allowable holding times, measured from the time of sample collection to the time of sample preparation or analysis, were met for each project sample analyzed as part of this sample delivery group. No qualification of the data is recommended.

Project-specific Reporting Limits

The reporting limits for the samples within this Sample Delivery Group (SDG) met or exceeded the minimum reporting limit requirements specified by the Project-specific Quality Assurance Project Plan (QAPP) with the following exception(s):

During the analysis of VOCs (EPA Method 8260B) the reporting limits were greater than the Project-specific Quality Assurance Project Plan (QAPP) criteria. The following project sample data as specified in the following table were affected:

Target Analyte(s)	QAPP RL	Sample ID	Lab Package RL	Reason	Action
All VOCs	1x	416D-020216-1300	2x	Dilution req'd by sample matrix	No further action
All VOCs	1x	417D-020216-1120	1.25x	Dilution req'd by sample matrix	No further action
All VOCs	1x	4184-020216-0001	1.25x	Dilution req'd by sample matrix	No further action

Action:
No further action - another target analyte was detected within the sample matrix that required dilution therefore no further action is necessary.

GC/MS Instrument Performance Check

GC/MS instrument performance checks for the instruments used in the analysis of project samples fell within method specific criteria without exception. No qualification of the data is recommended.

Initial Calibration Procedures

Initial instrument calibration procedures for the analysis of project samples were consistent with the guidelines prescribed by EPA protocols. No Qualification of the data is recommended.

Continuing Calibration Procedures

Continuing calibration verification (CCV) procedures for the analysis of project samples were consistent with the guidelines prescribed by EPA protocols, with the following exception(s):

During the analysis of VOCs (SW846 8260B), the continuing calibration verification (CCV) standards for the following target compound(s) exhibited a percent drift (%D) greater than the acceptance criteria of 25% and/or a RRF less than 0.05:

Inst.	Date / Time	Target Analyte(s)	%D	RRF	Affected Sample(s)	Corrective Action
A3UX15	02/01/16 11:44	1,4-Dioxane	-53.40	0.00	None, not target analyte	None.
A3UX15	02/05/16 11:01	Bromomethane	-32.10	0.08	All Project Samples	J/UJ
		Chloroethane	-40.70	0.13	All Project Samples	J/UJ
		1,4-Dioxane	-41.90	0.00	None, not target analyte	None.

Blank Sample Analysis

In accordance with cited USEPA guidelines, positive sample results should be reported unless the concentration of the compound in the project sample is less than or equal to 10 times (10X) the amount in any blank for metals and the common organic laboratory contaminants (methylene chloride, acetone, 2-butanone, cyclohexane, and phthalate esters), or 5 times (5X) the amount for other target compounds. Target compounds were not detected in associated blank samples (trip, equipment, method) prepared and analyzed concurrently with the project samples, with the following exception(s):

Blank	Target Analyte(s)	Concn.	Affected Sample(s)	Qualifiers
3114-020216-0002 Equipment Blank	Acetone	2.1 ug/L	732-020216-1405	U
	2-Butanone (MEK)	1.4 ug/L	None, all samples ND.	
4184-020216-0003 Equipment Blank	Acetone	2.0 ug/L	732-020216-1405	U
	2-Butanone (MEK)	1.0 ug/L	None, all samples ND.	
4184-020216-0002 Trip Blank	Acetone	1.5 ug/L	732-020216-1405	U

System Monitoring Compound Recoveries

System monitoring/surrogate compounds are added to each sample prior to analysis of organic parameters to confirm the efficiency of the sample preparation procedure. The calculated recovery for each surrogate compound was evaluated to confirm the accuracy of the reported results. The calculated recovery of these compounds fell within the laboratory specific quality control criteria. No qualification of the data is recommended.

Laboratory Control Samples, Matrix Spike/Matrix Spike Duplicate Recoveries

Analytical precision and accuracy was evaluated based on the laboratory control and matrix spike sample analyses performed concurrently with the project samples. For matrix spike samples, after the addition of a known amount of each target analyte to the sample matrix, the sample was analyzed to confirm the ability to identify these compounds within the sample matrix. For LCS analyses, after the addition of a known amount of each target analyte into laboratory reagent water, the sample was analyzed to confirm the ability of the analytical system to accurately quantify the compounds. The reported recovery of MS/MSD and LCS analyses fell within the laboratory QA acceptance criteria. No qualification of the data is recommended.

Internal Standard Recoveries

Internal Standard compounds were added to each sample matrix prior to the analysis of organic parameters to quantify the amount of the target compounds detected within each sample. The calculated response of each IS compound fell within the QA/QC criteria of +100% and – 50% of the corresponding CCV standard. No qualification of the data is recommended.

Field Duplicate Sample Analysis

The overall variability attributable to the sampling procedure, sample matrix, and laboratory procedures, was evaluated by assessing the relative percent difference (RPD) data from field duplicate samples. All calculated RPD values were within matrix specific data quality objectives, with the exception of results qualified "J" as shown in the table(s) below:

Target Analyte(s)	Original Sample ID. 417D-020216-1120	FD Sample ID. 4184-020216-0001	%RPD	Flag Original and FD sample results with:
cis-1,2-Dichloroethene	21 ug/L	22 ug/L	5%	None, Abs. Diff < RL
Trichloroethene	0.37 ug/L	1.3 U ug/L	NA	
Vinyl chloride	23 ug/L	24 ug/L	4%	

Target Analyte(s)	Original Sample ID. 784-020216-1125	FD Sample ID. 3114-020216-0001	%RPD	Flag Original and FD sample results with:
All VOCs	ND	ND	NA	None, all analytes ND.

Action:

If the sample matrix is solid and the %RPD is greater than 50%, the original sample results are qualified "J". If the sample matrix is water or air and the %RPD is greater than 35%, the original sample results are qualified "J".

Target Compound Identification

GC/MS qualitative analysis for organic parameters was performed to remove mis-identifications of the target compounds. The relative retention times (RRT) of all reported target compounds were within +/- 0.06 RRT units of the associated calibration standard RRT, and all ions present in the reference standard spectrum at a relative intensity greater than 10 percent were also present in the sample spectrum. No qualification of the data is recommended.

Sample Data Reporting Format

The sample data are presented using USEPA Contract Laboratory Protocol (CLP) format or equivalent. The data package has been reviewed for completeness and found to contain each required sample result and associated QA/QC report form. The reporting format is complete and compliant with the objectives of the project. No qualification of the data is recommended.

Data Qualifiers

Samples that contain results between the MDL and RL were flagged as estimated, "J", by the laboratory. The data user should be aware that there is a possibility of false positive or mis-identification at the quantitation levels. The laboratory also qualified results when target analytes were detected in the associated method/preparation blank sample. Based on a spot check of the data qualifiers used, these flags appeared to be applied to the reported results in accordance with EPA guidance.

Summary

The results presented in each report were found to be compliant with the data quality objectives for the project and usable. Based on our review, the usability of the data is 100%, with the few exceptions noted above.

Date: 3/15/2016

Data Usability Summary Report (DUSR)
Vandalia, Ohio - Quarterly Monitoring
Analytical Laboratory: TestAmerica, Inc. - North Canton, OH
Sample Delivery Group # 240-60533-1

Analytical results for the project samples were reviewed to evaluate the data usability. Data was assessed in accordance with guidance from the following Federal and/or State guidance documents:

- USEPA National Functional Guidelines for Organic Data Review (EPA 540-R-014-002)

and method protocol criteria where applicable as prescribed by "Test Methods for Evaluating Solid Waste", SW846, Update III, 1996, or Standard Methods for the Examination of Water and Wastewater, Eds 18-20.

This DUSR pertains to the following samples:

Sample ID	Sample ID	Sample ID
18-020316-1440	742-020316-1555	4184-020316-0002
434D-020316-1305	814-020316-1200	4184-020316-0003
444D-020316-1410	3114-020316-0001	
453D-020316-1545	4184-020316-0001	

Project Samples were analyzed according to the following analytical methods:

	Parameter	Analytical Method	Holding Time Criteria
1.	VOCs	EPA 8260B	14 days

The following items/criteria applicable to the analysis of project samples and associated QA/QC procedures were reviewed.

- Holding Times
- Project-specific Reporting Limits
- GC/MS Instrument Performance Check
- Initial Calibration Procedures
- Continuing Calibration Procedures
- Blank Sample Analysis
- System Monitoring Compound Recoveries
- Laboratory Control Samples, Matrix Spike/Matrix Spike Duplicate Recoveries
- Internal Standard Recoveries
- Field Duplicate Sample Analysis
- Target Compound Identification
- Sample Data Reporting Format
- Data Qualifiers
- Summary

Preservation and Holding Times

Maximum allowable holding times, measured from the time of sample collection to the time of sample preparation or analysis, were met for each project sample analyzed as part of this sample delivery group, with the following exception(s):

During the analysis of VOCs (EPA Method 8260B) preservation and/or technical holding times were exceeded for project samples shown below. Sample results should be qualified according to the actions specified in the following table:

Lab ID	Sample ID	Matrix	Action
240-60533-2	18-020316-1440	WG	See Action #1 Below
240-60533-7	434D-020316-1305	WG	See Action #1 Below
240-60533-8	444D-020316-1410	WG	See Action #1 Below
VM567641_00013	RESTEK Reagent	STD	See Action #2 Below
VM567641S_00007	RESTEK Reagent	STD	See Action #2 Below
VM567642_00015	RESTEK Reagent	STD	See Action #2 Below
VM567642S_00005	RESTEK Reagent	STD	See Action #2 Below
VM567643_00020	RESTEK Reagent	STD	See Action #2 Below
VM569724_00003	RESTEK Reagent	STD	See Action #3 Below

Action #1

The pH of these samples was greater than 2 at arrival to the laboratory. As acid preservation is required to limit biodegradation and the samples were all analyzed after 7 days from collection, qualify detects "J-" and non-detects "R".

Action #2

This standard expired "February 2016". The lab listed the expiration date as 2/29/16, which is supported by the RESTEK website. As samples were analyzed 2/1/16 and 2/2/16, the reviewer concedes with the laboratory listed date and the RESTEK website for expiration of the end of the month rather than the beginning. No action required.

Action #3

This standard expired "January 31, 2016". This standard was used to prepare the ICAL run on 11/20/15. No action is required.

Project-specific Reporting Limits

The reporting limits for the samples within this Sample Delivery Group (SDG) met or exceeded the minimum reporting limit requirements specified by the Project-specific Quality Assurance Project Plan (QAPP) with the following exception(s):

During the analysis of VOCs (EPA Method 8260B) the reporting limits were greater than the Project-specific Quality Assurance Project Plan (QAPP) criteria. The following project sample data as specified in the following table were affected:

Target Analyte(s)	QAPP RL	Sample ID	Lab Package RL	Reason	Action
All VOCs	1x	444D-020316-1410	2x	Dilution due to foaming	No further action

Action:

No further action - another target analyte was detected within the sample matrix that required dilution therefore no further action is necessary. Request Reanalysis - Contact lab to inquire on the reason for the higher reporting limit and whether the sample can be resampled within the maximum allowable holding time.

GC/MS Instrument Performance Check

GC/MS instrument performance checks for the instruments used in the analysis of project samples fell within method specific criteria without exception. No qualification of the data is recommended.

Initial Calibration Procedures

Initial instrument calibration procedures for the analysis of project samples were consistent with the guidelines prescribed by EPA protocols, with the following exception(s):

During the analysis of VOCs (SW846 8260B), the initial calibration standards for the following target compound(s) exhibited a percent relative standard deviation (%RSD) greater than the acceptance criteria of 30% and/or a RRF less than 0.05:

Inst.	Date / Time	Target Analyte(s)	%RSD	RRF	Affected Sample(s)	Corrective Action
A3UX10	12/10/16	Bromodichloromethane	6.50	RRF < 0.3	All Project Samples	R Flag
	13:55	cis-1,3-Dichloropropene	13.10	RRF < 0.3	All Project Samples	R Flag

Continuing Calibration Procedures

Continuing calibration verification (CCV) procedures for the analysis of project samples were consistent with the guidelines prescribed by EPA protocols, with the following exception(s):

During the analysis of VOCs (SW846 8260B), the continuing calibration verification (CCV) standards for the following target compound(s) exhibited a percent drift (%D) greater than the acceptance criteria of 25% and/or a RRF less than 0.05:

Inst.	Date / Time	Target Analyte(s)	%D	RRF	Affected Sample(s)	Corrective Action
A3UX10	12/10/15 16:07	Bromodichloromethane	0.20	RRF < 0.3	None, qualified by ICAL	None.
A3UX10	02/12/16 10:20	Bromomethane	-35.50	0.08	Samples analyzed on 2/12	J/UJ
		Chloroethane	-37.20	0.10	Samples analyzed on 2/12	J/UJ
		Hexane	21.10	0.06	None, not trgt analyte	None.
		1,2,4-Trichlorobenzene	-35.20	0.52	Samples analyzed on 2/12	J/UJ
		Hexachlorobutadiene	-32.00	0.23	None, not trgt analyte	None.
		Naphthalene	-44.00	1.03	None, not trgt analyte	None.
		1,2,3-Trichlorobenzene	-38.90	0.49	None, not trgt analyte	None.
		1,2-Dichloropropane	-5.50	RRF < 0.2	Samples analyzed on 2/12	J/R
		Bromodichloromethane	0.50	RRF < 0.3	None, qualified by ICAL	None.
A3UX10	02/15/16 23:05	Bromomethane	-45.00	0.07	Samples analyzed on 2/16	J/UJ
		Chloroethane	-58.70	0.07	Samples analyzed on 2/16	J/UJ
		1,3-Dichlorobenzene	-22.80	1.12	Samples analyzed on 2/16	J/UJ
		1,4-Dichlorobenzene	-21.30	1.19	Samples analyzed on 2/16	J/UJ
		Hexachlorobutadiene	-30.60	0.23	None, not trgt analyte	None.
		Naphthalene	-33.60	1.23	None, not trgt analyte	None.
		1,2,3-Trichlorobenzene	-30.30	1.23	None, not trgt analyte	None.
		1,2-Dichloropropane	-6.70	RRF < 0.2	Samples analyzed on 2/16	J/R
		Bromodichloromethane	-5.90	RRF < 0.3	None, qualified by ICAL	None.
		cis-1,3-Dichloropropene	-6.10	RRF < 0.3	None, qualified by ICAL	None.
A3UX10	02/17/16 08:47	Bromomethane	-37.90	0.08	Samples analyzed on 2/17	J/UJ
		Chloroethane	-47.70	0.08	Samples analyzed on 2/17	J/UJ
		Naphthalene	-28.00	1.34	None, not trgt analyte	None.
		Bromodichloromethane	-3.30	RRF < 0.3	None, qualified by ICAL	None.

Blank Sample Analysis

In accordance with cited USEPA guidelines, positive sample results should be reported unless the concentration of the compound in the project sample is less than or equal to 10 times (10X) the amount in any blank for metals and the common organic laboratory contaminants (methylene chloride, acetone, 2-butanone, cyclohexane, and phthalate esters), or 5 times (5X) the amount for other target compounds. Target compounds were not detected in associated blank samples (trip, equipment, method) prepared and analyzed concurrently with the project samples, with the following exception(s):

Blank	Target Analyte(s)	Concn.	Affected Sample(s)	Flag sample results with a "U" if < to this value
3114-020316-0001	Acetone	1.3 ug/L	None, all samples ND.	None.
Equipment Blank	2-Butanone (MEK)	1.3 ug/L	None, all samples ND.	None.
4184-020316-0003	Acetone	1.3 ug/L	None, all samples ND.	None.
Equipment Blank	2-Butanone (MEK)	1.1 ug/L	None, all samples ND.	None.

System Monitoring Compound Recoveries

System monitoring/surrogate compounds are added to each sample prior to analysis of organic parameters to confirm the efficiency of the sample preparation procedure. The calculated recovery for each surrogate compound was evaluated to confirm the accuracy of the reported results. The calculated recovery of these compounds fell within the laboratory specific quality control criteria. No qualification of the data is recommended.

Laboratory Control Samples, Matrix Spike/Matrix Spike Duplicate Recoveries

Analytical precision and accuracy was evaluated based on the laboratory control and matrix spike sample analyses performed concurrently with the project samples. For matrix spike samples, after the addition of a known amount of each target analyte to the sample matrix, the sample was analyzed to confirm the ability to identify these compounds within the sample matrix. For LCS analyses, after the addition of a known amount of each target analyte into laboratory reagent water, the sample was analyzed to confirm the ability of the analytical system to accurately quantify the compounds. The reported recovery of MS/MSD and LCS analyses fell within the laboratory QA acceptance criteria, with the following exception(s):

LCS ID / Project Sample MS	Type	Target Analyte(s)	%R Criteria	%R	%RPD	Affected Sample(s)
434D-020316-1305	MS	All VOCs	Various	Within	Within	None, all within limits.
LCS 240-217533/4 217533	LCS	1,2,4-Trichlorobenzene	61 - 120	60		453D-020316-1545 3114-020316-0001

Action:

If the LCS %R is greater than the upper acceptance limit, associated target analyte positive results are qualified "J" and non-detects should not be qualified. If the LCS %R is less than the lower acceptance limit associated target analyte positive results are qualified "J" and non-detects are qualified "R". If the MS/MSD is from a project sample and the %R greater than the upper acceptance limit, associated target analyte positive results are qualified "J" and non-detects should not be qualified. If the MS/MSD %R is >10%, but less than the lower acceptance limit, associated analyte positive results are qualified "J" and non-detects are qualified "UJ". If the MS/MSD %R is less than 10% associated target analyte positive results are qualified "J" and non-detects are qualified "R". MS/MSD qualifiers are only applied to affected samples of the same matrix. If the MS/MSD is a LAB sample do not qualify project samples.

Internal Standard Recoveries

Internal Standard compounds were added to each sample matrix prior to the analysis of organic parameters to quantify the amount of the target compounds detected within each sample. The calculated response of each IS compound fell within the QA/QC criteria of +100% and – 50% of the corresponding CCV standard. No qualification of the data is recommended.

Field Duplicate Sample Analysis

The overall variability attributable to the sampling procedure, sample matrix, and laboratory procedures, was evaluated by assessing the relative percent difference (RPD) data from field duplicate samples. All calculated RPD values were within matrix specific data quality objectives, with the exception of results qualified "J" as shown in the table(s) below:

Target Analyte(s)	Original Sample ID.	FD Sample ID.	%RPD	Flag Original and FD sample results with:
	814-020316-1200	4184-020316-0001		
All VOCs	ND	ND	NA	None, all analytes ND.

Action:

If the sample matrix is solid and the %RPD is greater than 50%, the original sample results are qualified "J". If the sample matrix is water or air and the %RPD is greater than 35%, the original sample results are qualified "J".

Target Compound Identification

GC/MS qualitative analysis for organic parameters was performed to remove mis-identifications of the target compounds. The relative retention times (RRT) of all reported target compounds were within +/- 0.06 RRT units of the associated calibration standard RRT, and all ions present in the reference standard spectrum at a relative intensity greater than 10 percent were also present in the sample spectrum. No qualification of the data is recommended.

Sample Data Reporting Format

The sample data are presented using USEPA Contract Laboratory Protocol (CLP) format or equivalent. The data package has been reviewed for completeness and found to contain each required sample result and associated QA/QC report form. The reporting format is complete and compliant with the objectives of the project. No qualification of the data is recommended.

Data Qualifiers

Samples that contain results between the MDL and RL were flagged as estimated, "J", by the laboratory. The data user should be aware that there is a possibility of false positive or mis-identification at the quantitation levels. The laboratory also qualified results when target analytes were detected in the associated method/preparation blank sample. Based on a spot check of the data qualifiers used, these flags appeared to be applied to the reported results in accordance with EPA guidance.

Summary

The results presented in each report were found to be compliant with the data quality objectives for the project and usable. Based on our review, the usability of the data is 100%, with the few exceptions noted above.

Date: 3/16/2016

Data Usability Summary Report (DUSR)
Vandalia, Ohio - Quarterly Monitoring
Analytical Laboratory: ALS Environmental - Holland, MI
Sample Delivery Group # 240-60659-1

Analytical results for the project samples were reviewed to evaluate the data usability. Data was assessed in accordance with guidance from the following Federal and/or State guidance documents:

- USEPA National Functional Guidelines for Organic Data Review (EPA 540-R-014-002)

and method protocol criteria where applicable as prescribed by "Test Methods for Evaluating Solid Waste", SW846, Update III, 1996, or Standard Methods for the Examination of Water and Wastewater, Eds 18-20.

This DUSR pertains to the following samples:

Sample ID	Sample ID
435D-020416-1455	815-020516-1205
715-020416-1340	3114-020416-0001
787-020416-1150	3114-020416-0002
793-020416-1245	3114-020516-0001

Project Samples were analyzed according to the following analytical methods:

	Parameter	Analytical Method	Holding Time Criteria
1.	VOCs	EPA 8260B	14 days

The following items/criteria applicable to the analysis of project samples and associated QA/QC procedures were reviewed.

- Holding Times
- Project-specific Reporting Limits
- GC/MS Instrument Performance Check
- Initial Calibration Procedures
- Continuing Calibration Procedures
- Blank Sample Analysis
- System Monitoring Compound Recoveries
- Laboratory Control Samples, Matrix Spike/Matrix Spike Duplicate Recoveries
- Internal Standard Recoveries
- Field Duplicate Sample Analysis
- Target Compound Identification
- Sample Data Reporting Format
- Data Qualifiers
- Summary

Preservation and Holding Times

Maximum allowable holding times, measured from the time of sample collection to the time of sample preparation or analysis, were met for each project sample analyzed as part of this sample delivery group, with the following exception(s):

During the analysis of VOCs (EPA Method 8260B) preservation and/or technical holding times were exceeded for project samples shown below. Sample results should be qualified according to the actions specified in the following table:

Lab ID	Sample ID	Matrix	Action
1602762-01A	435D-020416-1455	W	See Action #1 Below
1602762-01A	435D-020416-1455	W	See Action #2 Below
1602762-02A	715-020416-1340	W	See Action #2 Below
1602762-03A	793-020416-1245	W	See Action #2 Below
1602762-04A	787-020416-1150	W	See Action #2 Below
1602762-05A	3114-020416-0001	W	See Action #2 Below
1602762-06A	3114-020416-0002	W	See Action #2 Below
1602762-07A	815-020516-1205	W	See Action #2 Below
1602762-08A	3114-020516-0001	W	See Action #2 Below

Action #1

This sample (and splits for MS/MSD) were sent to the laboratory unpreserved. They were analyzed on the 13th day following collection, exceeding the non-preserved holding time of 7 days. Qualify "J-/R".

Action #2

Acid preservation for these samples was verified on arrival to ALS and found to be greater than 2. As this indicates a lack of preservation and all samples were analyzed beyond 7 days from collection, all samples are qualified "J-/R". In addition, the ALS sample receipt notes headspace in unidentified vials. It is the reviewers opinion that the preservation qualification covers this issue as well.

Project-specific Reporting Limits

The reporting limits for the samples within this Sample Delivery Group (SDG) met or exceeded the minimum reporting limit requirements specified by the Project-specific Quality Assurance Project Plan (QAPP) with the following exception(s):

During the analysis of VOCs (EPA Method 8260B) the reporting limits were greater than the Project-specific Quality Assurance Project Plan (QAPP) criteria. The following project sample data as specified in the following table were affected:

Target Analyte(s)	QAPP RL	Sample ID	Lab Package RL	Reason	Action
cis-1,2-Dichloroethene	1x	3114-020416-0001	5x	Dilution req'd by sample matrix	No further action
Trichloroethene	1x	3114-020416-0001	5x	Dilution req'd by sample matrix	No further action
cis-1,2-Dichloroethene	1x	787-020416-1150	5x	Dilution req'd by sample matrix	No further action
Trichloroethene	1x	787-020416-1150	5x	Dilution req'd by sample matrix	No further action

Action:
No further action - another target analyte was detected within the sample matrix that required dilution therefore no further action is necessary.
Request Reanalysis - Contact lab to inquire on the reason for the higher reporting limit and whether the sample can be resampled within the maximum allowable holding time.

GC/MS Instrument Performance Check

GC/MS instrument performance checks for the instruments used in the analysis of project samples fell within method specific criteria without exception. No qualification of the data is recommended.

Initial Calibration Procedures

Initial instrument calibration procedures for the analysis of project samples were consistent with the guidelines prescribed by EPA protocols, with the following exception(s):

During the analysis of VOCs (SW846 8260B), the initial calibration standards for the following target compound(s) exhibited a percent relative standard deviation (%RSD) greater than the acceptance criteria of 30% and/or a RRF less than 0.05:

Inst.	Date / Time	Target Analyte(s)	%RSD	RRF	Affected Sample(s)	Corrective Action
VMS5	02/17/16 08:59	Acetone	106.36	0.10	3114-020516-0001	Estimate detects.
		2-Butanone (MEK)	58.16	0.10	None, all samples ND.	None.
		4-Methyl-2-pentanone (MIBK)	29.10	0.30	None, all samples ND.	None.
		2-Hexanone	54.93	0.20	None, all samples ND.	None.
		1,2-Dibromoethane	24.79	0.20	None, all samples ND.	None.

Continuing Calibration Procedures

Continuing calibration verification (CCV) procedures for the analysis of project samples were consistent with the guidelines prescribed by EPA protocols, with the following exception(s):

During the analysis of VOCs (SW846 8260B), the continuing calibration verification (CCV) standards for the following target compound(s) exhibited a percent drift (%D) greater than the acceptance criteria of 25% and/or a RRF less than 0.05:

Inst.	Date / Time	Target Analyte(s)	%D	RRF	Affected Sample(s)	Corrective Action
VMS5	02/16/16 06:32	1,2-Dibromoethane	-101.40	0.40	None, all samples ND.	None.
		Acetone	58.40	0.10	Qualified by ICL.	None.
		Styrene	-25.70	1.13	None, all samples ND.	None.
VMS5	02/17/16 11:04	Acetone	56.80	0.11	Qualified by ICL.	None.
		2-Hexanone	-41.30	0.21	None, all samples ND.	None.
VMS5	02/18/16 08:33	Bromomethane	-45.80	0.40	None, all samples ND.	None.
		Acetone	46.90	0.13	Qualified by ICL.	None.
		2-Hexanone	-64.70	0.25	None, all samples ND.	None.
		1,2-Dibromoethane	20.30	0.19	None, all samples ND.	None.

Blank Sample Analysis

In accordance with cited USEPA guidelines, positive sample results should be reported unless the concentration of the compound in the project sample is less than or equal to 10 times (10X) the amount in any blank for metals and the common organic laboratory contaminants (methylene chloride, acetone, 2-butanone, cyclohexane, and phthalate esters), or 5 times (5X) the amount for other target compounds. Target analytes were not detected in associated blank samples (trip, equipment, method) prepared and analyzed concurrently with the project samples. No qualification of the data is recommended.

System Monitoring Compound Recoveries

System monitoring/surrogate compounds are added to each sample prior to analysis of organic parameters to confirm the efficiency of the sample preparation procedure. The calculated recovery for each surrogate compound was evaluated to confirm the accuracy of the reported results. The calculated recovery of these compounds fell within the laboratory specific quality control criteria. No qualification of the data is recommended.

Laboratory Control Samples, Matrix Spike/Matrix Spike Duplicate Recoveries

Analytical precision and accuracy was evaluated based on the laboratory control and matrix spike sample analyses performed concurrently with the project samples. For matrix spike samples, after the addition of a known amount of each target analyte to the sample matrix, the sample was analyzed to confirm the ability to identify these compounds within the sample matrix. For LCS analyses, after the addition of a known amount of each target analyte into laboratory reagent water, the sample was analyzed to confirm the ability of the analytical system to accurately quantify the compounds. The reported recovery of MS/MSD and LCS analyses fell within the laboratory QA acceptance criteria, with the following exception(s):

LCS ID / Project Sample MS	Type	Target Analyte(s)	%R Criteria	%R	%RPD	Affected Sample(s)
LVCSW1-160217	LCS	1,2-Dibromoethane	80 - 150	200		None, all samples ND.
435D-020416-1455	MS	1,2-Dibromoethane	80 - 150	210		None, sample ND.
R181944	MS	2-Butanone (MEK)	55 - 150	154		None, sample ND.
	MS	Acetone	60 - 160	244		None, sample ND.
435D-020416-1455	MSD	1,2-Dibromoethane	80 - 150	211	0.5	None, sample ND.
R181944	MSD	Acetone	60 - 160	245	0.429	None, sample ND.
	MSD	Ethylbenzene	85 - 125	126	1.84	None, sample ND.
	MSD	Isopropylbenzene	80 - 127	129	2.19	None, sample ND.

Action:

If the LCS %R is greater than the upper acceptance limit, associated target analyte positive results are qualified "J" and non-detects should not be qualified. If the LCS %R is less than the lower acceptance limit associated target analyte positive results are qualified "J" and non-detects are qualified "R". If the MS/MSD is from a project sample and the %R greater than the upper acceptance limit, associated target analyte positive results are qualified "J" and non-detects should not be qualified. If the MS/MSD %R is >10%, but less than the lower acceptance limit, associated analyte positive results are qualified "J" and non-detects are qualified "UJ". If the MS/MSD %R is less than 10% associated target analyte positive results are qualified "J" and non-detects are qualified "R". MS/MSD qualifiers are only applied to affected samples of the same matrix. If the MS/MSD is a LAB sample do not qualify project samples.

Internal Standard Recoveries

Internal Standard compounds were added to each sample matrix prior to the analysis of organic parameters to quantify the amount of the target compounds detected within each sample. The calculated response of each IS compound fell within the QA/QC criteria of +100% and – 50% of the corresponding CCV standard. No qualification of the data is recommended.

Field Duplicate Sample Analysis

The overall variability attributable to the sampling procedure, sample matrix, and laboratory procedures, was evaluated by assessing the relative percent difference (RPD) data from field duplicate samples. All calculated RPD values were within matrix specific data quality objectives, with the exception of results qualified "J" as shown in the table(s) below:

	Original Sample ID.	FD Sample ID.		Flag Original and FD
Target Analyte(s)	787-020416-1150	3114-020416-0001	%RPD	sample results with:
trans-1,2-Dichloroethene	96 ug/L	99 ug/L	3%	
cis-1,2-Dichloroethene	88 ug/L	96 ug/L	9%	
Trichloroethene	100 ug/L	100 ug/L	0%	

Action:

If the sample matrix is solid and the %RPD is greater than 50%, the original sample results are qualified "J". If the sample matrix is water or air and the %RPD is greater than 35%, the original sample results are qualified "J".

Target Compound Identification

GC/MS qualitative analysis for organic parameters was performed to remove mis-identifications of the target compounds. The relative retention times (RRT) of all reported target compounds were within +/- 0.06 RRT units of the associated calibration standard RRT, and all ions present in the reference standard spectrum at a relative intensity greater than 10 percent were also present in the sample spectrum. No qualification of the data is recommended.

Sample Data Reporting Format

The sample data are presented using USEPA Contract Laboratory Protocol (CLP) format or equivalent. The data package has been reviewed for completeness and found to contain each required sample result and associated QA/QC report form. The reporting format is complete and compliant with the objectives of the project. No qualification of the data is recommended.

Data Qualifiers

Samples that contain results between the MDL and RL were flagged as estimated, "J", by the laboratory. The data user should be aware that there is a possibility of false positive or mis-identification at the quantitation levels. The laboratory also qualified results when target analytes were detected in the associated method/preparation blank sample. Based on a spot check of the data qualifiers used, these flags appeared to be applied to the reported results in accordance with EPA guidance.

Summary

The results presented in each report were found to be compliant with the data quality objectives for the project and usable. Based on our review, the usability of the data is 100%, with the few exceptions noted above.

Date: 4/1/2016

Data Usability Summary Report (DUSR)
Vandalia, Ohio - Quarterly Monitoring
Analytical Laboratory: ALS Environmental - Holland, MI
Sample Delivery Group # 240-60664-1

Analytical results for the project samples were reviewed to evaluate the data usability. Data was assessed in accordance with guidance from the following Federal and/or State guidance documents:

- USEPA National Functional Guidelines for Organic Data Review (EPA 540-R-014-002)

and method protocol criteria where applicable as prescribed by "Test Methods for Evaluating Solid Waste", SW846, Update III, 1996, or Standard Methods for the Examination of Water and Wastewater, Eds 18-20.

This DUSR pertains to the following samples:

Sample ID	Sample ID
806-020416-1130	4184-020416-0001
807-020416-1300	4184-020416-0002
809-020416-1415	4184-020416-0003

Project Samples were analyzed according to the following analytical methods:

	Parameter	Analytical Method	Holding Time Criteria
1.	VOCs	EPA 8260B	14 days

The following items/criteria applicable to the analysis of project samples and associated QA/QC procedures were reviewed.

- Holding Times
- Project-specific Reporting Limits
- GC/MS Instrument Performance Check
- Initial Calibration Procedures
- Continuing Calibration Procedures
- Blank Sample Analysis
- System Monitoring Compound Recoveries
- Laboratory Control Samples, Matrix Spike/Matrix Spike Duplicate Recoveries
- Internal Standard Recoveries
- Field Duplicate Sample Analysis
- Target Compound Identification
- Sample Data Reporting Format
- Data Qualifiers
- Summary

Preservation and Holding Times

Maximum allowable holding times, measured from the time of sample collection to the time of sample preparation or analysis, were met for each project sample analyzed as part of this sample delivery group, with the following exception(s):

During the analysis of VOCs (EPA Method 8260B) preservation and/or technical holding times were exceeded for project samples shown below. Sample results should be qualified according to the actions specified in the following table:

Lab ID	Sample ID	Matrix	Action
1602764-04A	4184-020416-0002	WG	See Action #1 Below
All Project Samples	All Project Samples	WG	See Action #2 Below

Action #1
Acid preservation for this sample was verified on arrival to ALS and found to be greater than 2. As this indicates a lack of preservation and the sample was analyzed beyond 7 days from collection, data is qualified "J-/R".

Action #2
ALS login states "Some of the vials have headspace". Upon contacting the lab, TestAmerica did not note any headspace, and ALS confirms all of the remaining vials post-analysis have headspace of >6mm. ALS assured the reviewer that had analysis been completed on a vial with headspace, the analyst would have made a note. Therefore, the reviewer recommends no qualification due to this statement.

Project-specific Reporting Limits

The reporting limits for the samples within this Sample Delivery Group (SDG) met or exceeded the minimum reporting limit requirements specified by the Project-specific Quality Assurance Project Plan (QAPP) with the following exception(s):

During the analysis of VOCs (EPA Method 8260B) the reporting limits were greater than the Project-specific Quality Assurance Project Plan (QAPP) criteria. The following project sample data as specified in the following table were affected:

Target Analyte(s)	QAPP RL	Sample ID	Lab Package RL	Reason	Action
cis-1,2-Dichloroethene	1x	806-020416-1130	200x	Dilution req'd by sample matrix	No further action
trans-1,2-Dichloroethene	1x	806-020416-1130	200x	Dilution req'd by sample matrix	No further action
1,1-Dichloroethane	1x	806-020416-1130	200x	Dilution req'd by sample matrix	No further action

Action:
No further action - another target analyte was detected within the sample matrix that required dilution therefore no further action is necessary.
Request Reanalysis - Contact lab to inquire on the reason for the higher reporting limit and whether the sample can be resampled within the maximum allowable holding time.

GC/MS Instrument Performance Check

GC/MS instrument performance checks for the instruments used in the analysis of project samples fell within method specific criteria without exception. No qualification of the data is recommended.

Initial Calibration Procedures

Initial instrument calibration procedures for the analysis of project samples were consistent with the guidelines prescribed by EPA protocols, with the following exception(s):

During the analysis of VOCs (SW846 8260B), the initial calibration standards for the following target compound(s) exhibited a percent relative standard deviation (%RSD) greater than the acceptance criteria of 30% and/or a RRF less than 0.05:

Inst.	Date / Time	Target Analyte(s)	%RSD	RRF	Affected Sample(s)	Corrective Action
VMS5	02/17/16 08:59	Acetone	106.36	0.10	All Project Samples	J/UJ
		2-Butanone (MEK)	58.16	0.10	All Project Samples	J/UJ
		4-Methyl-2-pentanone (MIBK)	29.10	0.30	All Project Samples	J/UJ
		2-Hexanone	54.93	0.20	All Project Samples	J/UJ
		1,2-Dibromoethane	24.79	0.20	All Project Samples	J/UJ

Continuing Calibration Procedures

Continuing calibration verification (CCV) procedures for the analysis of project samples were consistent with the guidelines prescribed by EPA protocols, with the following exception(s):

During the analysis of VOCs (SW846 8260B), the continuing calibration verification (CCV) standards for the following target compound(s) exhibited a percent drift (%D) greater than the acceptance criteria of 25% and/or a RRF less than 0.05:

Inst.	Date / Time	Target Analyte(s)	%D	RRF	Affected Sample(s)	Corrective Action
VMS5	02/16/16 06:32	1,2-Dibromoethane	-101.40	0.40	Qualified by ICL	See Action #1 Below
		Acetone	58.40	0.10	Qualified by ICL	See Action #1 Below
		Styrene	-25.70	1.13	None, wrong date.	None.
VMS5	02/17/16 11:04	Acetone	56.80	0.11	Qualified by ICL	See Action #1 Below
		2-Hexanone	-41.30	0.21	Qualified by ICL	See Action #1 Below
VMS5	02/18/16 08:33	Bromomethane	-45.80	0.40	Samples anylzed on 2/18	See Action #1 Below
		Acetone	46.90	0.13	Qualified by ICL	See Action #1 Below
		2-Hexanone	-64.70	0.25	Qualified by ICL	See Action #1 Below
		1,2-Dibromoethane	20.30	0.19	Qualified by ICL	See Action #1 Below

Blank Sample Analysis

In accordance with cited USEPA guidelines, positive sample results should be reported unless the concentration of the compound in the project sample is less than or equal to 10 times (10X) the amount in any blank for metals and the common organic laboratory contaminants (methylene chloride, acetone, 2-butanone, cyclohexane, and phthalate esters), or 5 times (5X) the amount for other target compounds. Target compounds were not detected in associated blank samples (trip, equipment, method) prepared and analyzed concurrently with the project samples, with the following exception(s):

Blank	Target Analyte(s)	Concn.	Affected Sample(s)	Qualifiers
4184-020416-0001 Trip Blank	Acetone	32.0 ug/L	None, all samples ND	None.
4184-020416-0003 Equipment Blank	Acetone	4.1 ug/L	None, all samples ND	None.

System Monitoring Compound Recoveries

System monitoring/surrogate compounds are added to each sample prior to analysis of organic parameters to confirm the efficiency of the sample preparation procedure. The calculated recovery for each surrogate compound was evaluated to confirm the accuracy of the reported results. The calculated recovery of these compounds fell within the laboratory specific quality control criteria. No qualification of the data is recommended.

Laboratory Control Samples, Matrix Spike/Matrix Spike Duplicate Recoveries

Analytical precision and accuracy was evaluated based on the laboratory control and matrix spike sample analyses performed concurrently with the project samples. For matrix spike samples, after the addition of a known amount of each target analyte to the sample matrix, the sample was analyzed to confirm the ability to identify these compounds within the sample matrix. For LCS analyses, after the addition of a known amount of each target analyte into laboratory reagent water, the sample was analyzed to confirm the ability of the analytical system to accurately quantify the compounds. The reported recovery of MS/MSD and LCS analyses fell within the laboratory QA acceptance criteria, with the following exception(s):

LCS ID / Project Sample MS	Type	Target Analyte(s)	%R Criteria	%R	%RPD	Affected Sample(s)
LVLCSW1-160217	LCS	1,2-Dichloroethane	80 - 150	200		None, samples all ND.
435D-020416-1455	MS	1,2-Dibromoethane	80 - 150	210		435D-020416-1455
R181944	MS	2-Butanone (MEK)	55 - 150	154		435D-020416-1455
(Different SDG)	MS	Acetone	60 - 160	244		435D-020416-1455
435D-020416-1455	MSD	1,2-Dibromoethane	80 - 150	211	0.5	435D-020416-1455
R181944	MSD	Acetone	60 - 160	245	0.429	435D-020416-1455
(Different SDG)	MSD	Ethylbenzene	85 - 125	126	1.84	435D-020416-1455
	MSD	Isopropylbenzene	80 - 127	129	2.19	435D-020416-1455
LVCSW2-160218	LCS	1,2-Dibromoethane	80 - 150	213		None, samples all ND.
R181980a	LCS	Isopropylbenzene	80 - 127	130		None, samples all ND.
1602836-01A	MS	1,2-Dibromoethane	80 - 150	200		None, Not HA Sample
R181980a	MSD	1,2-Dibromoethane	80 - 150	207	3.48	

Action:

If the LCS %R is greater than the upper acceptance limit, associated target analyte positive results are qualified "J" and non-detects should not be qualified. If the LCS %R is less than the lower acceptance limit associated target analyte positive results are qualified "J" and non-detects are qualified "R". If the MS/MSD is from a project sample and the %R greater than the upper acceptance limit, associated target analyte positive results are qualified "J" and non-detects should not be qualified. If the MS/MSD %R is >10%, but less than the lower acceptance limit, associated analyte positive results are qualified "J" and non-detects are qualified "UJ". If the MS/MSD %R is less than 10% associated target analyte positive results are qualified "J" and non-detects are qualified "R". MS/MSD qualifiers are only applied to affected samples of the same matrix. If the MS/MSD is a LAB sample do not qualify project samples.

Internal Standard Recoveries

Internal Standard compounds were added to each sample matrix prior to the analysis of organic parameters to quantify the amount of the target compounds detected within each sample. The calculated response of each IS compound fell within the QA/QC criteria of +100% and – 50% of the corresponding CCV standard. No qualification of the data is recommended.

Field Duplicate Sample Analysis

The overall variability attributable to the sampling procedure, sample matrix, and laboratory procedures, was evaluated by assessing the relative percent difference (RPD) data from field duplicate samples. All calculated RPD values were within matrix specific data quality objectives, with the exception of results qualified "J" as shown in the table(s) below:

	Original Sample ID.	FD Sample ID.		Flag Original and FD
Target Analyte(s)	807-020416-1300	4184-020416-0002	%RPD	sample results with:
cis-1,2-Dichloroethene	1.1 ug/L	0.73 ug/L	NA	None, Abs. Diff < RL

Action:

If the sample matrix is solid and the %RPD is greater than 50%, the original sample results are qualified "J". If the sample matrix is water or air and the %RPD is greater than 35%, the original sample results are qualified "J".

Target Compound Identification

GC/MS qualitative analysis for organic parameters was performed to remove mis-identifications of the target compounds. The relative retention times (RRT) of all reported target compounds were within +/- 0.06 RRT units of the associated calibration standard RRT, and all ions present in the reference standard spectrum at a relative intensity greater than 10 percent were also present in the sample spectrum. No qualification of the data is recommended.

Sample Data Reporting Format

The sample data are presented using USEPA Contract Laboratory Protocol (CLP) format or equivalent. The data package has been reviewed for completeness and found to contain each required sample result and associated QA/QC report form. The reporting format is complete and compliant with the objectives of the project. No qualification of the data is recommended.

Data Qualifiers

Samples that contain results between the MDL and RL were flagged as estimated, "J", by the laboratory. The data user should be aware that there is a possibility of false positive or mis-identification at the quantitation levels. The laboratory also qualified results when target analytes were detected in the associated method/preparation blank sample. Based on a spot check of the data qualifiers used, these flags appeared to be applied to the reported results in accordance with EPA guidance.

Summary

The results presented in each report were found to be compliant with the data quality objectives for the project and usable. Based on our review, the usability of the data is 100%, with the few exceptions noted above.

Date: 4/1/2016

Data Usability Summary Report (DUSR)
Vandalia Ohio - Non-Routine Event
Analytical Laboratory: TestAmerica, Inc. - North Canton, OH
Sample Delivery Group # 240-62254-1

Analytical results for the project samples were reviewed to evaluate the data usability. Data was assessed in accordance with guidance from the following Federal and/or State guidance documents:

- USEPA National Functional Guidelines for Organic Data Review (EPA 540-R-014-002)

and method protocol criteria where applicable as prescribed by "Test Methods for Evaluating Solid Waste", SW846, Update III, 1996, or Standard Methods for the Examination of Water and Wastewater, Eds 18-20.

This DUSR pertains to the following samples:

Sample ID
SW04-031616-1530
4226-031616-0001

Project Samples were analyzed according to the following analytical methods:

	Parameter	Analytical Method	Holding Time Criteria
1.	VOCs	EPA 8260B	14 days

The following items/criteria applicable to the analysis of project samples and associated QA/QC procedures were reviewed.

- Holding Times
- Project-specific Reporting Limits
- GC/MS Instrument Performance Check
- Initial Calibration Procedures
- Continuing Calibration Procedures
- Blank Sample Analysis
- System Monitoring Compound Recoveries
- Laboratory Control Samples, Matrix Spike/Matrix Spike Duplicate Recoveries
- Internal Standard Recoveries
- Target Compound Identification
- Sample Data Reporting Format
- Data Qualifiers
- Summary

Preservation and Holding Times

Maximum allowable holding times, measured from the time of sample collection to the time of sample preparation or analysis, were met for each project sample analyzed as part of this sample delivery group. No qualification of the data is recommended.

Project-specific Reporting Limits

The reporting limits for the samples within this Sample Delivery Group (SDG) met or exceeded the minimum reporting limit requirements specified by the Project-specific Quality Assurance Project Plan (QAPP). No qualification of the data is recommended.

GC/MS Instrument Performance Check

GC/MS instrument performance checks for the instruments used in the analysis of project samples fell within method specific criteria without exception. No qualification of the data is recommended.

Initial Calibration Procedures

Initial instrument calibration procedures for the analysis of project samples were consistent with the guidelines prescribed by EPA protocols. No Qualification of the data is recommended.

Continuing Calibration Procedures

Continuing calibration verification (CCV) procedures for the analysis of project samples were consistent with the guidelines prescribed by EPA protocols, with the following exception(s):

During the analysis of VOCs (SW846 8260B), the continuing calibration verification (CCV) standards for the following target compound(s) exhibited a percent drift (%D) greater than the acceptance criteria of 25% and/or a RRF less than 0.05:

Inst.	Date / Time	Target Analyte(s)	%D	RRF	Affected Sample(s)	Corrective Action
A3UX15 ICV	02/22/16 13:33	Bromomethane	-36.80		All Project Samples	See Action #1 Below
		Chloroethane	-31.40		All Project Samples	See Action #1 Below
		Acetone	-41.60		All Project Samples	See Action #1 Below
		1,4-Dioxane	-56.70		None, analyte not reported	None.
A3UX15 CCV	03/22/16 10:02	All VOCs	Within	Within	None, samples run on 3/22 are not to be validated.	None.
A3UX15 CCV	03/24/16 09:30	All VOCs	Within	Within	None, all within limits.	None.

Blank Sample Analysis

In accordance with cited USEPA guidelines, positive sample results should be reported unless the concentration of the compound in the project sample is less than or equal to 10 times (10X) the amount in any blank for metals and the common organic laboratory contaminants (methylene chloride, acetone, 2-butanone, cyclohexane, and phthalate esters), or 5 times (5X) the amount for other target compounds. Target compounds were not detected in associated blank samples (trip, equipment, method) prepared and analyzed concurrently with the project samples, with the following exception(s):

Blank	Target Analyte(s)	Concn.	Affected Sample(s)	Qualifiers
MB (222624)	Acetone	1.08 ug/L	All Samples in Batch	U
MB (223000)	Acetone	1.12 ug/L	All Samples in Batch	U
4226-031616-0001 Trip Blank	Acetone	2.1 ug/L	Made ND by Method Blank	U

System Monitoring Compound Recoveries

System monitoring/surrogate compounds are added to each sample prior to analysis of organic parameters to confirm the efficiency of the sample preparation procedure. The calculated recovery for each surrogate compound was evaluated to confirm the accuracy of the reported results. The calculated recovery of these compounds fell within the laboratory specific quality control criteria. No qualification of the data is recommended.

Laboratory Control Samples, Matrix Spike/Matrix Spike Duplicate Recoveries

Analytical precision and accuracy was evaluated based on the laboratory control and matrix spike sample analyses performed concurrently with the project samples. For matrix spike samples, after the addition of a known amount of each target analyte to the sample matrix, the sample was analyzed to confirm the ability to identify these compounds within the sample matrix. For LCS analyses, after the addition of a known amount of each target analyte into laboratory reagent water, the sample was analyzed to confirm the ability of the analytical system to accurately quantify the compounds. The reported recovery of MS/MSD and LCS analyses fell within the laboratory QA acceptance criteria. No qualification of the data is recommended.

Internal Standard Recoveries

Internal Standard compounds were added to each sample matrix prior to the analysis of organic parameters to quantify the amount of the target compounds detected within each sample. The calculated response of each IS compound fell within the QA/QC criteria of +100% and – 50% of the corresponding CCV standard. No qualification of the data is recommended.

Target Compound Identification

GC/MS qualitative analysis for organic parameters was performed to remove mis-identifications of the target compounds. The relative retention times (RRT) of all reported target compounds were within +/- 0.06 RRT units of the associated calibration standard RRT, and all ions present in the reference standard spectrum at a relative intensity greater than 10 percent were also present in the sample spectrum. No qualification of the data is recommended.

Sample Data Reporting Format

The sample data are presented using USEPA Contract Laboratory Protocol (CLP) format or equivalent. The data package has been reviewed for completeness and found to contain each required sample result and associated QA/QC report form. The reporting format is complete and compliant with the objectives of the project. No qualification of the data is recommended.

Data Qualifiers

Samples that contain results between the MDL and RL were flagged as estimated, "J", by the laboratory. The data user should be aware that there is a possibility of false positive or mis-identification at the quantitation levels. The laboratory also qualified results when target analytes were detected in the associated method/preparation blank sample. Based on a spot check of the data qualifiers used, these flags appeared to be applied to the reported results in accordance with EPA guidance.

Summary

The results presented in each report were found to be compliant with the data quality objectives for the project and usable. Based on our review, the usability of the data is 100%, with the few exceptions noted above.

Date: 4/8/2016

Attachment C
Groundwater Migration Control System
Monthly Discharge Reports

VANDALIA-MIGRATION CONTROL
DAILY DISCHARGE REPORT-October 2015

DATE	AVERAGE INFLOW (GPM) BEDROCK/OVERBURDEN/SECOND SAND	DAILY DISCHARGE (GPD)
10/1/2015	27.0	38915
10/2/2015	27.5	39600
10/3/2015	29.6	42605
10/4/2015	27.4	39434
10/5/2015	27.0	38941
10/6/2015	26.7	38460
10/7/2015	23.1	33265
10/8/2015	24.7	35497
10/9/2015	26.8	38658
10/10/2015	26.8	38603
10/11/2015	26.9	38693
10/12/2015	26.9	38730
10/13/2015	26.8	38581
10/14/2015	26.4	37981
10/15/2015	26.6	38254
10/16/2015	26.4	38047
10/17/2015	26.4	38008
10/18/2015	26.4	37953
10/19/2015	26.4	37960
10/20/2015	26.4	37979
10/21/2015	26.4	38002
10/22/2015	26.4	37950
10/23/2015	23.9	34379
10/24/2015	27.5	39539
10/25/2015	26.7	38460
10/26/2015	26.4	38078
10/27/2015	20.6	29714
10/28/2015	18.4	26537
10/29/2015	27.9	40206
10/30/2015	26.0	37427
10/31/2015	27.9	40194

TOTAL DISCHARGE (gal) = 1166649
AVERAGE DAILY DISCHARGE (gal/day)= 37634

VANDALIA-MIGRATION CONTROL
DAILY DISCHARGE REPORT- November 2015

DATE	AVERAGE INFLOW (GPM) BEDROCK/OVERBURDEN/SECOND SAND	DAILY DISCHARGE (GPD)
11/1/2015	11.7	16905
11/2/2015	17.5	25192
11/3/2015	17.3	24907
11/4/2015	17.2	24795
11/5/2015	23.4	33699
11/6/2015	12.9	18542
11/7/2015	15.4	22140
11/8/2015	14.9	21485
11/9/2015	14.7	21214
11/10/2015	4.7	6758
11/11/2015	-0.1	0
11/12/2015	0.3	0
11/13/2015	-0.1	0
11/14/2015	-0.1	0
11/15/2015	-0.1	0
11/16/2015	-0.1	0
11/17/2015	-0.1	0
11/18/2015	-0.1	0
11/19/2015	-0.1	0
11/20/2015	10.1	14475
11/21/2015	26.7	38497
11/22/2015	25.3	36364
11/23/2015	24.9	35785
11/24/2015	24.6	35458
11/25/2015	24.5	35315
11/26/2015	24.4	35171
11/27/2015	25.6	36919
11/28/2015	35.6	51220
11/29/2015	30.2	43547
11/30/2015	32.0	46016

TOTAL DISCHARGE (gal) = 624402
AVERAGE DAILY DISCHARGE (gal/day)= 20813

VANDALIA-MIGRATION CONTROL
DAILY DISCHARGE REPORT-December 2015

DATE	AVERAGE INFLOW (GPM) BEDROCK/OVERBURDEN/SECOND SAND	DAILY DISCHARGE (GPD)
12/1/2015	31.5	45310
12/2/2015	31.3	45035
12/3/2015	31.1	44798
12/4/2015	31.0	44584
12/5/2015	30.9	44495
12/6/2015	30.9	44512
12/7/2015	30.9	44518
12/8/2015	27.8	40064
12/9/2015	28.4	40878
12/10/2015	30.2	43504
12/11/2015	30.2	43558
12/12/2015	30.3	43582
12/13/2015	30.3	43573
12/14/2015	30.3	43656
12/15/2015	30.1	43299
12/16/2015	30.4	43750
12/17/2015	30.4	43802
12/18/2015	30.4	43727
12/19/2015	30.3	43611
12/20/2015	30.2	43549
12/21/2015	28.2	40538
12/22/2015	29.7	42708
12/23/2015	29.4	42357
12/24/2015	28.8	41479
12/25/2015	28.6	41212
12/26/2015	28.5	41067
12/27/2015	27.8	40002
12/28/2015	27.3	39324
12/29/2015	28.4	40959
12/30/2015	28.2	40660
12/31/2015	28.1	40532

TOTAL DISCHARGE = 1324643
AVERAGE DAILY DISCHARGE (gal/day)= 42730

VANDALIA-MIGRATION CONTROL
DAILY DISCHARGE REPORT-January 2016

DATE	AVERAGE INFLOW (GPM) BEDROCK/OVERBURDEN/SECOND SAND	DAILY DISCHARGE (GPD)
1/1/2016	27.8	40063
1/2/2016	27.2	39239
1/3/2016	26.8	38611
1/4/2016	26.4	37974
1/5/2016	26.0	37415
1/6/2016	25.7	37016
1/7/2016	25.5	36674
1/8/2016	29.2	42057
1/9/2016	26.6	38239
1/10/2016	36.4	52428
1/11/2016	30.1	43390
1/12/2016	29.3	42255
1/13/2016	28.3	40704
1/14/2016	30.3	43692
1/15/2016	32.5	46750
1/16/2016	30.3	43675
1/17/2016	28.5	41106
1/18/2016	27.8	40070
1/19/2016	24.0	34589
1/20/2016	27.3	39245
1/21/2016	27.5	39569
1/22/2016	26.9	38720
1/23/2016	26.8	38615
1/24/2016	22.8	32801
1/25/2016	15.9	22837
1/26/2016	26.7	38456
1/27/2016	26.3	37842
1/28/2016	26.3	37809
1/29/2016	26.2	37705
1/30/2016	26.2	37663
1/31/2016	26.1	37652

TOTAL DISCHARGE (gal) = 1214859
AVERAGE DAILY DISCHARGE (gal/day)= 39189

VANDALIA-MIGRATION CONTROL
DAILY DISCHARGE REPORT-February 2016

DATE	AVERAGE INFLOW (GPM) BEDROCK/OVERBURDEN/SECOND SAND	DAILY DISCHARGE (GPD)
2/1/2016	26.1	37518
2/2/2016	27.9	40233
2/3/2016	20.0	28829
2/4/2016	28.1	40448
2/5/2016	26.7	38382
2/6/2016	26.9	38772
2/7/2016	26.4	37962
2/8/2016	27.0	38856
2/9/2016	27.1	39029
2/10/2016	25.7	36972
2/11/2016	26.4	37992
2/12/2016	26.1	37637
2/13/2016	25.9	37249
2/14/2016	25.8	37113
2/15/2016	26.6	38271
2/16/2016	26.9	38699
2/17/2016	26.0	37438
2/18/2016	25.6	36876
2/19/2016	25.2	36247
2/20/2016	25.5	36659
2/21/2016	25.3	36411
2/22/2016	25.2	36262
2/23/2016	25.1	36153
2/24/2016	26.5	38105
2/25/2016	39.9	57514
2/26/2016	32.3	46529
2/27/2016	27.7	39845
2/28/2016	26.6	38293
2/29/2016	27.2	39214

TOTAL DISCHARGE (gal) = 1119506
AVERAGE DAILY DISCHARGE (gal/day)= 38604

VANDALIA-MIGRATION CONTROL
DAILY DISCHARGE REPORT-March 2016

DATE	AVERAGE INFLOW (GPM) BEDROCK/OVERBURDEN/SECOND SAND	DAILY DISCHARGE (GPD)
3/1/2016	29.0	41733
3/2/2016	27.3	39250
3/3/2016	28.5	41043
3/4/2016	28.4	40967
3/5/2016	25.8	37188
3/6/2016	25.2	36285
3/7/2016	26.3	37887
3/8/2016	27.5	39589
3/9/2016	29.1	41954
3/10/2016	36.6	52776
3/11/2016	40.8	58791
3/12/2016	31.3	45124
3/13/2016	36.0	51882
3/14/2016	36.0	51864
3/15/2016	35.5	51094
3/16/2016	29.9	43086
3/17/2016	26.6	38267
3/18/2016	26.0	37491
3/19/2016	28.7	41389
3/20/2016	27.2	39152
3/21/2016	12.1	17389
3/22/2016	28.7	41328
3/23/2016	28.7	41289
3/24/2016	28.7	41257
3/25/2016	28.3	40718
3/26/2016	28.9	41614
3/27/2016	28.9	41619
3/28/2016	29.8	42871
3/29/2016	22.9	32943
3/30/2016	17.9	25748
3/31/2016	32.5	46835

TOTAL DISCHARGE (gal) = 1280421
AVERAGE DAILY DISCHARGE (gal/day)= 41304

Attachment D
Groundwater Migration Control System
Activity Log

Vandalia Treatment System
Activity Log

Date	Time on site	Time left site	H&A personnel	Activities while on-site
8/26/15	15:15	16:15	MR	XO Bag Filters
8/28/15	1300	1530	RP	Change BF, Wkly Inspections
8/31/15	1140	1240	ELS	Change Bag Filters
9/2/15	1400	1600	ELS	Change BF, weekly inspection
9/3/15	2130	2300	ELS	Alarm Response
9/4/15	14.30	15.30	WJR	Change BF
9/4/15	19:10	2000	WJR	Alarm response
9/8/15	0780	0830	ELS	Alarm response; Change Bag Filters
9/11/15	1600	1800	MR	XO B.F. Weekly INSP
9/14/15	1550	1640	WJR	Change BF
9/16/15	1800	1900	MR	Change BF
9/18/15	1230	1430	ELS	Change BF, Weekly Inspection
9/21/15	0930	1030	ELS	Change BF & Switch Maxisperse
9/22/15	0930	1030	RP	Change BF
9/25/15	1040	1400	WJR/TV	Restarted flow meter for BR (tripped breaker); Restarted OB pump (OV)
9/24/15	9:38	10:30	TMV	Change BF
10/2/15	1230	1430	RP	Wkly, Change BF
10/5/15	1000	1100	ELS	Change BF
10/7/15	1530	1630	RP	Change BF
10/8/15	1230	1630	RP	MC Sampling, Wkly, Circuit breaker fix,
10/9/15	1145	1245	ELS	Change BF
10/12/15	14:30	15:30	MR	Change B.F.
10/14/15	14:00	16:00	MR	Change B.F. Replace Sump Pump
10/16/15	15:00	17:00	MR	Weekly - XO Bag Filters

Vandalia Treatment System
Activity Log

Date	Time on site	Time left site	H&A personnel	Activities while on-site
10/14/15	11:00	12:15	TMV	Change BF Check OS
10/21/15	16:00	17:00	MR	Change B.F.
10/23/15	10:00	16:00	MR/RP	change B.F. Backwash Weekly Inspection
10/26/15	12:00	13:00	MR	XO Bag Filters
10/28/15	0930	1300	ELS	Alarm Response; Change Bag Filters
10/30/15	1300	1500	RP	BF change, Wkly
11/1/15	0930	1130	ELS	Alarm Response
11/2/15	0800	0830	RP	BF change
11/5/15	1330	1430	ELS	Weekly Inspection
11/5/15	1430	1600	RP	MC Sampling
11/6/15	0930	1230	ELS	Alarm Response ✓
11/12/15	1030	1430	ELS/JWR	System Maintenance & Repairs
11/16/15	1000	1430	ELS	System Repairs
11/20/15	1000	1630	ELS/JWR	System Repairs / Pump change out (Carbon pump); System Restart
11/24/15	1300	1400	ELS/RP	Change BF & Change Maxisperse / Grease new pump
11/25/15	1000	1200	ELS/RP	Change BF & Weekly Inspection / Correct leak in system
11/29/15	1430	1530	ELS/TMV	Change BF
12/4/15	1300	1500	ELS	Change BF Weekly Inspection
12/7/15	1100	1400	RP	MC Sampling Anti-foam agent Eval; BF change
12/8/15	0930	1530	RP/ELS	SYSTEM BACKWASH
12/9/15	1400	1630	WJR	Piping modifications
12/11/15	11:00	13:00	MR	Weekly INSP.
12/15/15	13:00	14:30	MR/RP	B.F. change - System Alarm
12/16/15	14:00	15:00	MR	B.F. Change

Vandalia Treatment System
Activity Log

Date	Time on site	Time left site	H&A personnel	Activities while on-site
12/8/15	9:30	11:30	M.R.	Weekly Inspection
12/21/15	1100	1300	ELS	Alarm Response
12/24/15	[illegible]/000	1100	RP	WKly Inspection
12/28/15	1400	1530	ELS	Bag Filter Change
1/2/16	16:25	17:35	WJR	Weekly Inspection
1/4/16	12:00	16:00	MR	BF Change - Indoor Air Sampling @ MC & inside Plant
1/6/16	1100	1300	ELS	Monthly Sampling & Change BF
1/8/16	1200	1400	ELS	Change BF & Weekly Inspection
1/11/16	1100	1300	ELS	Change BF
1/12/16	10:30	12:30	MR	Weekly Inspection
1/15/16	[illegible]:00	15:15	MR	BF Change
1/18/16	14:00	15:00	MR	BF Change
1/19/16	9:45	1600	MR/RP	Back Wash
1/21/16	1300	1430	RP	WKly Inspection
1/22/16	11:30	1430	MR	Change B.F., Recieve Delivery of Maxisperse, Change Eye Wash Solution
1/25/16	0800	1100	ELS	Alarm Response, Maxisperse Change
1/27/16	1600	1760	MR	X6 Bag Filters
1/29/16	1600	1800	MR-RP	Weekly INSPECTION
2/[illegible]/16	9:30	10:30	MR	System Shutdown - Alarm Response
2/3/16	12:30	13:00	MR	" "
2/5/16	1200	1430	RP	WKly, BF Change
2/8/16	11:00	14:00	TMV/WJR	Sample MC, Change BF, Drum purge H2O
2/12/16	16:45	18:30	WJR	Weekly inspection, change BF
2/15/16	10:50	11:30	WJR	Change BF

Vandalia Treatment System
Activity Log

Date	Time on site	Time left site	H&A personnel	Activities while on-site
2-17-16	13:00	14:00	MR	B.F. Change
2-19-16	10:00	12:00	MR & R.P.	Weekly & BF change
2-19-16	13:00	14:00	MR & R.P.	Eye Wash Station, replace solution
2/24/16	1100	1330	RP	Shut down resp.
2/26/16	15:00	1700	MR	Weekly INSP - Chage BF - Change Bolts
2/29/16	16:25	16:55	WTR	Change BF
3/4/16	1030	1330	RP	MC Sampling, BF change
3/7/16	20:00	21:00	MR	Change B.F. → on way to Fort Wayne
3/9/16	1500	1700	RP	Wkly.
3/11/16	1500	1600	MR	BF Change
3/14/16	1015	1215	ELS	BF change', check capture wells
3/17/16	1400	1500	RP/MR	BF Change - Change Out SS Pump
3/17/16	0800	1500	RP	SS pump change-out
3/18/16	1230	1500	RP/JR	BF change, SS pump start, wkly
3/21/16	0700	2130	ELS/TMV	Acid WASH
3/24/16	1430	1530	MR	Change Out Bag Filters
3/25/16	1000	1400	MR/ELS	Hose Maintenance; Tanker Truck pH; Weekly Inspection
3/28/16	1130	1230	MR	Change Bag Filters
3/30/16	8:30	10:30	MR	Change Bag Filters & Alarm Response & Weekly Insp
3/30/16	11:30	12:10	MR/JR	Start up S.S. pump
3/31/16	11:00	15:00	MR	Recieve Shipment of Maxisperse (1 Drum) & Replace Spent Drum

Attachment E
Groundwater Migration Control System
Inspection Checklists

VANDALIA-MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
TABLE 1 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 10/2/15
INSPECTION BY: RP

	MINIMUM FREQUENCY		INSPECTED/	CORRECTIVE	
	EVERY WEEK	EVERY MONTH	TESTED (YES or NO)	MEASURES REQ'D (YES or NO)	COMMENTS
SITE SAFETY					
FIRST AID KIT	X		Y	N	
EYEWASH STATION	X		Y	N	
FIRE EXTINGUISHERS\SMOKE DETECTORS	X		Y	N	
EMERGENCY LIGHTING	X		Y	N	
SITE ISSUES	X		Y	N	
SITE SECURITY					
FENCING		X			
GATES		X			
LOCKS		X			
SIGNS		X			
SITE		X			
SITE GROUNDS					
DRAINAGE DITCHES/SWALES		X			
BUILDING		X			
RECOVERY WELL		X			
ACCESS ROAD		X			
WASTE					
CARBON	X		Y	N	
SOLID	X		Y	N	

Notes:

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS MAINTENANCE PLAN
TABLE 2 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 10/2/15
INSPECTION BY: RP

	EVERY WEEK	EVERY MONTH	EVERY 3 MONTHS	MIN. 6 MO. OR AS REQD(1)	INSPECTED/ TESTED (YES) OR (NO)	CORRECTIVE MEASURES REQ'D (YES or NO)	COMMENTS
GROUNDWATER SYSTEM							
VERIFY EQUIPMENT IS OPERATING WITH NO DAMAGE OR LEAKS	X				Y	N	
LOG SYSTEM OPERATING PARAMETERS	X				Y	N	
USE PLC TO CHECK SYSTEM OPERATING CONDITIONS	X				Y	N	
TEST LEVEL CONTROLS ETC.	X				Y	N	
USE PLC TO VERIFY DIAL OUT STATUS IS ENABLED	X				Y	N	
INSPECT CONTAINMENT SUMP/FLOOR SEAL	X				Y	N	
INSPECT BUILDING AND FOUNDATION INTEGRITY	X				Y	N	
INSPECT\VERIFY HEATING AND VENTILATING SYSTEM OPERATIONS				X			Test Trip Set Point and Clean Screens and Louvers
INSPECT\VISUALLY CHECK LIGHTING SYSTEM & EMERGENCY SYSTEM	X						
VISUALLY INSPECT ELECTRICAL SYSTEM	X				Y	N	
VERIFY PUMP OPERATION	X				Y	N	
WELL LEVELS - MANUALLY CHECK VWATER LEVEL VS. PLC DATA		X			Y	N	
SAMPLING (SEE TABLE IN NPDES ATTACHMENTS)		X					
AIR STRIPPER - CHECK SOLIDS ACCUMULATION				X			
CHECK BAG FILTER PRESSURES	X				Y	N	
CHECK CARBON FILTER PRESSURES	X				Y	N	
AIR STRIPPER - CHECK BLOWER OPERATION AND PRESSURE DROP	X				Y	N	
AMP TRANSFER PUMP MOTORS				X			
TRANSFER PUMPS - PERFORM P.M. SERVICE				X			
AIR STRIPPER - MEASURE AIR FLOW, FULL INSPECTION				X			
CHECK & CALIBRATE INSTRUMENTATION				X			
MANUALLY OPERATE & CHECK VALVES				X			
MANUALLY TEST SAFETY INTERLOCKS			X				

Notes:

[1] Frequency that may be required is based on manufacturer data for the system equipment, system alarms, and Owner requirements

WELL ID	TIME	WATER LEVEL TOR	TOR ELEVATION	WATER ELEVATION TOR
MW-301D	1340	35.35	970.44	935.09
MW-414D	1330	36.45	971.91	935.46
MW-413D	1320	34.70	970.13	935.43
MW-416D	1340	30.48	965.84	935.86

VANDALIA-MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
TABLE 1 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 10/8/15
INSPECTION BY: RP

	MINIMUM FREQUENCY		INSPECTED/	CORRECTIVE	
	EVERY WEEK	EVERY MONTH	TESTED (YES or NO)	MEASURES REQ'D (YES or NO)	COMMENTS
SITE SAFETY					
FIRST AID KIT	X		Y	N	
EYEWASH STATION	X		Y	N	
FIRE EXTINGUISHERS\SMOKE DETECTORS	X		Y	N	
EMERGENCY LIGHTING	X		Y	N	
SITE ISSUES	X		Y	N	
SITE SECURITY					
FENCING		X			
GATES		X			
LOCKS		X			
SIGNS		X			
SITE		X			
SITE GROUNDS					
DRAINAGE DITCHES/SWALES		X			
BUILDING		X			
RECOVERY WELL		X			
ACCESS ROAD		X			
WASTE					
CARBON	X		Y	N	
SOLID	X		Y	N	

Notes:

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS MAINTENANCE PLAN
TABLE 2 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 10/8/15
INSPECTION BY: RP

	EVERY WEEK	EVERY MONTH	EVERY 3 MONTHS	MIN. 6 MO. OR AS REQD(1)	INSPECTED/ TESTED (YES) OR (NO)	CORRECTIVE MEASURES REQ'D (YES or NO)	COMMENTS
GROUNDWATER SYSTEM							
VERIFY EQUIPMENT IS OPERATING WITH NO DAMAGE OR LEAKS	X				Y	N	
LOG SYSTEM OPERATING PARAMETERS	X				Y	N	
USE PLC TO CHECK SYSTEM OPERATING CONDITIONS	X				Y	N	
TEST LEVEL CONTROLS ETC.	X				Y	N	
USE PLC TO VERIFY DIAL OUT STATUS IS ENABLED	X				Y	N	
INSPECT CONTAINMENT SUMP/FLOOR SEAL	X				Y	N	
INSPECT BUILDING AND FOUNDATION INTEGRITY	X				Y	N	
INSPECT\VERIFY HEATING AND VENTILATING SYSTEM OPERATIONS				X			Test Trip Set Point and Clean Screens and Louvers
INSPECT\VISUALLY CHECK LIGHTING SYSTEM & EMERGENCY SYSTEM	X				Y	N	
VISUALLY INSPECT ELECTRICAL SYSTEM	X				Y	N	
VERIFY PUMP OPERATION	X				Y	N	
WELL LEVELS - MANUALLY CHECK VWATER LEVEL VS. PLC DATA		X					
SAMPLING (SEE TABLE IN NPDES ATTACHMENTS)		X					
AIR STRIPPER - CHECK SOLIDS ACCUMULATION				X			
CHECK BAG FILTER PRESSURES	X				Y	N	
CHECK CARBON FILTER PRESSURES	X				Y	N	
AIR STRIPPER - CHECK BLOWER OPERATION AND PRESSURE DROP	X				Y	N	
AMP TRANSFER PUMP MOTORS				X			
TRANSFER PUMPS - PERFORM P.M. SERVICE				X			
AIR STRIPPER - MEASURE AIR FLOW, FULL INSPECTION				X			
CHECK & CALIBRATE INSTRUMENTATION				X			
MANUALLY OPERATE & CHECK VALVES				X			
MANUALLY TEST SAFETY INTERLOCKS			X				

Notes:

[1] Frequency that may be required is based on manufacturer data for the system equipment, system alarms, and Owner requirements

WELL ID	TIME	WATER LEVEL TOR	TOR ELEVATION	WATER ELEVATION TOR
MW-301D	1535	35.36	970.44	935.08
MW-414D	1525	36.51	971.91	935.40
MW-413D	1520	34.74	970.13	935.39
MW-416D	1515	30.46	965.84	935.38

VANDALIA-MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
TABLE 1 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 10/16/15
INSPECTION BY: Mike Rasmussen

	MINIMUM FREQUENCY		INSPECTED/	CORRECTIVE	
	EVERY WEEK	EVERY MONTH	TESTED (YES or NO)	MEASURES REQ'D (YES or NO)	COMMENTS
SITE SAFETY					
FIRST AID KIT	X		Y	N	
EYEWASH STATION	X		Y	N	
FIRE EXTINGUISHERS\SMOKE DETECTORS	X		Y	N	
EMERGENCY LIGHTING	X		Y	N	
SITE ISSUES	X		Y	N	
SITE SECURITY					
FENCING		X	Y	N	
GATES		X	Y	N	
LOCKS		X	Y	N	
SIGNS		X	Y	N	
SITE		X	Y	N	
SITE GROUNDS					
DRAINAGE DITCHES/SWALES		X	Y	N	
BUILDING		X	Y	N	
RECOVERY WELL		X	Y	N	
ACCESS ROAD		X	Y	N	
WASTE					
CARBON	X		Y	N	
SOLID	X		Y	N	

Notes:

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS MAINTENANCE PLAN
TABLE 2 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 10.16.15
INSPECTION BY: Michael Rasmussen

	EVERY WEEK	EVERY MONTH	EVERY 3 MONTHS	MIN. 6 MO. OR AS REQD(1)	INSPECTED/ TESTED (YES) OR (NO)	CORRECTIVE MEASURES REQ'D (YES or NO)	COMMENTS
GROUNDWATER SYSTEM							
VERIFY EQUIPMENT IS OPERATING WITH NO DAMAGE OR LEAKS	X				Y	N	Leak @ BRIN sample Valve
LOG SYSTEM OPERATING PARAMETERS	X				Y	N	
USE PLC TO CHECK SYSTEM OPERATING CONDITIONS	X				Y	N	
TEST LEVEL CONTROLS ETC.	X				Y	N	
USE PLC TO VERIFY DIAL OUT STATUS IS ENABLED	X				Y	N	
INSPECT CONTAINMENT SUMP/FLOOR SEAL	X				Y	N	
INSPECT BUILDING AND FOUNDATION INTEGRITY	X				Y	N	
INSPECT\VERIFY HEATING AND VENTILATING SYSTEM OPERATIONS				X			Test Trip Set Point and Clean Screens and Louvers
INSPECT\VISUALLY CHECK LIGHTING SYSTEM & EMERGENCY SYSTEM	X				Y	N	
VISUALLY INSPECT ELECTRICAL SYSTEM	X				Y	N	
VERIFY PUMP OPERATION	X				Y	N	
WELL LEVELS - MANUALLY CHECK VWATER LEVEL VS. PLC DATA		X					
SAMPLING (SEE TABLE IN NPDES ATTACHMENTS)		X					
AIR STRIPPER - CHECK SOLIDS ACCUMULATION				X			
CHECK BAG FILTER PRESSURES	X				X	N	
CHECK CARBON FILTER PRESSURES	X				Y	N	
AIR STRIPPER - CHECK BLOWER OPERATION AND PRESSURE DROP	X				Y	N	
AMP TRANSFER PUMP MOTORS				X			
TRANSFER PUMPS - PERFORM P.M. SERVICE				X			
AIR STRIPPER - MEASURE AIR FLOW, FULL INSPECTION				X			
CHECK & CALIBRATE INSTRUMENTATION				X			
MANUALLY OPERATE & CHECK VALVES				X			
MANUALLY TEST SAFETY INTERLOCKS			X				

Notes:

[1] Frequency that may be required is based on manufacturer data for the system equipment, system alarms, and Owner requirements

WELL ID	TIME	WATER LEVEL TOR	TOR ELEVATION	WATER ELEVATION TOR
MW-301D	11:55	35.20	970.44	935.24
MW-414D	11:50	36.40	971.91	935.51
MW-413D	12:00	34.70	970.13	935.43
MW-416D	11:35	30.42	965.84	935.42

VANDALIA-MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
TABLE 1 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 10/23/15
INSPECTION BY: Michael Rasmussen

	MINIMUM FREQUENCY		INSPECTED/	CORRECTIVE	
	EVERY WEEK	EVERY MONTH	TESTED (YES or NO)	MEASURES REQ'D (YES or NO)	COMMENTS
SITE SAFETY					
FIRST AID KIT	X		Y	N	
EYEWASH STATION	X		Y	N	
FIRE EXTINGUISHERS\SMOKE DETECTORS	X		Y	N	
EMERGENCY LIGHTING	X		Y	N	
SITE ISSUES	X		Y	N	
SITE SECURITY					
FENCING		X	Y	N	
GATES		X	Y	N	
LOCKS		X	Y	N	
SIGNS		X	Y	N	
SITE		X	Y	N	
SITE GROUNDS					
DRAINAGE DITCHES/SWALES		X	Y	N	
BUILDING		X	Y	N	
RECOVERY WELL		X	Y	N	
ACCESS ROAD		X	Y	N	
WASTE					
CARBON	X		Y	N	
SOLID	X		Y	N	

Notes:

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS MAINTENANCE PLAN
TABLE 2 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 10/23/15
INSPECTION BY: Michael Rasmussen

	EVERY WEEK	EVERY MONTH	EVERY 3 MONTHS	MIN. 6 MO. OR AS REQD(1)	INSPECTED/ TESTED (YES) OR (NO)	CORRECTIVE MEASURES REQ'D (YES or NO)	COMMENTS
GROUNDWATER SYSTEM							
VERIFY EQUIPMENT IS OPERATING WITH NO DAMAGE OR LEAKS	X				Y	Y	Leaky Valve @ BRIN sample point
LOG SYSTEM OPERATING PARAMETERS	X				Y	N	
USE PLC TO CHECK SYSTEM OPERATING CONDITIONS	X				Y	N	
TEST LEVEL CONTROLS ETC.	X				Y	N	
USE PLC TO VERIFY DIAL OUT STATUS IS ENABLED	X				Y	N	
INSPECT CONTAINMENT SUMP/FLOOR SEAL	X				Y	N	
INSPECT BUILDING AND FOUNDATION INTEGRITY	X				Y	N	
INSPECT\VERIFY HEATING AND VENTILATING SYSTEM OPERATIONS				X			Test Trip Set Point and Clean Screens and Louvers
INSPECT\VISUALLY CHECK LIGHTING SYSTEM & EMERGENCY SYSTEM	X				Y	N	
VISUALLY INSPECT ELECTRICAL SYSTEM	X				Y	N	
VERIFY PUMP OPERATION	X				Y	N	
WELL LEVELS - MANUALLY CHECK VWATER LEVEL VS. PLC DATA		X					
SAMPLING (SEE TABLE IN NPDES ATTACHMENTS)		X					
AIR STRIPPER - CHECK SOLIDS ACCUMULATION				X			
CHECK BAG FILTER PRESSURES	X				Y	N	
CHECK CARBON FILTER PRESSURES	X				Y	N	
AIR STRIPPER - CHECK BLOWER OPERATION AND PRESSURE DROP	X				Y	N	
AMP TRANSFER PUMP MOTORS				X			
TRANSFER PUMPS - PERFORM P.M. SERVICE				X			
AIR STRIPPER - MEASURE AIR FLOW, FULL INSPECTION				X			
CHECK & CALIBRATE INSTRUMENTATION				X			
MANUALLY OPERATE & CHECK VALVES				X			
MANUALLY TEST SAFETY INTERLOCKS			X				

Notes:

[1] Frequency that may be required is based on manufacturer data for the system equipment, system alarms, and Owner requirements

WELL ID	TIME	WATER LEVEL TOR	TOR ELEVATION	WATER ELEVATION TOR
MW-301D		35.39	970.44	935.05
MW-414D		36.60	971.91	935.31
MW-413D		34.98	970.13	935.15
MW-416D		30.77	965.84	935.07

VANDALIA-MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
TABLE 1 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 10/30/15
INSPECTION BY: RP

	MINIMUM FREQUENCY		INSPECTED/	CORRECTIVE	
	EVERY WEEK	EVERY MONTH	TESTED (YES or NO)	MEASURES REQ'D (YES or NO)	COMMENTS
SITE SAFETY					
FIRST AID KIT	X		Y	N	
EYEWASH STATION	X		Y	N	
FIRE EXTINGUISHERS\SMOKE DETECTORS	X		Y	N	
EMERGENCY LIGHTING	X		Y	N	
SITE ISSUES	X		Y	N	
SITE SECURITY					
FENCING		X			
GATES		X			
LOCKS		X			
SIGNS		X			
SITE		X			
SITE GROUNDS					
DRAINAGE DITCHES/SWALES		X			
BUILDING		X			
RECOVERY WELL		X			
ACCESS ROAD		X			
WASTE					
CARBON	X		Y	N	
SOLID	X		Y	N	

Notes:

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS MAINTENANCE PLAN
TABLE 2 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 10/30/15
INSPECTION BY: RP

	EVERY WEEK	EVERY MONTH	EVERY 3 MONTHS	MIN. 6 MO. OR AS REQD(1)	INSPECTED/ TESTED (YES) OR (NO)	CORRECTIVE MEASURES REQ'D (YES or NO)	COMMENTS
GROUNDWATER SYSTEM							
VERIFY EQUIPMENT IS OPERATING WITH NO DAMAGE OR LEAKS	X				Y	N	
LOG SYSTEM OPERATING PARAMETERS	X				Y	N	
USE PLC TO CHECK SYSTEM OPERATING CONDITIONS	X				Y	N	
TEST LEVEL CONTROLS ETC.	X				Y	N	
USE PLC TO VERIFY DIAL OUT STATUS IS ENABLED	X				Y	N	
INSPECT CONTAINMENT SUMP/FLOOR SEAL	X				Y	N	
INSPECT BUILDING AND FOUNDATION INTEGRITY	X				Y	N	
INSPECT\VERIFY HEATING AND VENTILATING SYSTEM OPERATIONS				X			Test Trip Set Point and Clean Screens and Louvers
INSPECT\VISUALLY CHECK LIGHTING SYSTEM & EMERGENCY SYSTEM	X				Y	N	
VISUALLY INSPECT ELECTRICAL SYSTEM	X				Y	N	
VERIFY PUMP OPERATION	X				Y	N	
WELL LEVELS - MANUALLY CHECK VWATER LEVEL VS. PLC DATA		X					
SAMPLING (SEE TABLE IN NPDES ATTACHMENTS)		X					
AIR STRIPPER - CHECK SOLIDS ACCUMULATION				X			
CHECK BAG FILTER PRESSURES	X				Y	N	
CHECK CARBON FILTER PRESSURES	X				Y	N	
AIR STRIPPER - CHECK BLOWER OPERATION AND PRESSURE DROP	X				Y	N	
AMP TRANSFER PUMP MOTORS				X			
TRANSFER PUMPS - PERFORM P.M. SERVICE				X			
AIR STRIPPER - MEASURE AIR FLOW, FULL INSPECTION				X			
CHECK & CALIBRATE INSTRUMENTATION				X			
MANUALLY OPERATE & CHECK VALVES				X			
MANUALLY TEST SAFETY INTERLOCKS			X				

Notes:

[1] Frequency that may be required is based on manufacturer data for the system equipment, system alarms, and Owner requirements

WELL ID	TIME	WATER LEVEL TOR	TOR ELEVATION	WATER ELEVATION TOR
MW-301D		35.41	970.44	935.03
MW-414D		36.65	971.91	935.26
MW-413D		34.95	970.13	935.18
MW-416D		30.78	965.84	935.06

VANDALIA-MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
TABLE 1 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 11-5-15
INSPECTION BY: BL

	MINIMUM FREQUENCY		INSPECTED/	CORRECTIVE	
	EVERY WEEK	EVERY MONTH	TESTED (YES or NO)	MEASURES REQ'D (YES or NO)	COMMENTS
SITE SAFETY					
FIRST AID KIT	X		Y	N	
EYEWASH STATION	X		Y	N	
FIRE EXTINGUISHERS\SMOKE DETECTORS	X		Y	N	
EMERGENCY LIGHTING	X		Y	N	
SITE ISSUES	X		Y	N	
SITE SECURITY					
FENCING		X			
GATES		X			
LOCKS		X			
SIGNS		X			
SITE		X			
SITE GROUNDS					
DRAINAGE DITCHES/SWALES		X			
BUILDING		X			
RECOVERY WELL		X			
ACCESS ROAD		X			
WASTE					
CARBON	X		Y	N	
SOLID	X		Y	N	

Notes:

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS MAINTENANCE PLAN
TABLE 2 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 11-5-15
INSPECTION BY: ELS

	EVERY WEEK	EVERY MONTH	EVERY 3 MONTHS	MIN. 6 MO. OR AS REQD(1)	INSPECTED/ TESTED (YES) OR (NO)	CORRECTIVE MEASURES REQ'D (YES or NO)	COMMENTS
GROUNDWATER SYSTEM							
VERIFY EQUIPMENT IS OPERATING WITH NO DAMAGE OR LEAKS	X				Y	N	
LOG SYSTEM OPERATING PARAMETERS	X				Y	N	
USE PLC TO CHECK SYSTEM OPERATING CONDITIONS	X				Y	N	
TEST LEVEL CONTROLS ETC.	X				Y	N	
USE PLC TO VERIFY DIAL OUT STATUS IS ENABLED	X				Y	N	
INSPECT CONTAINMENT SUMP/FLOOR SEAL	X				Y	N	
INSPECT BUILDING AND FOUNDATION INTEGRITY	X				Y	N	
INSPECT\VERIFY HEATING AND VENTILATING SYSTEM OPERATIONS				X			Test Trip Set Point and Clean Screens and Louvers
INSPECT\VISUALLY CHECK LIGHTING SYSTEM & EMERGENCY SYSTEM	X				Y	N	
VISUALLY INSPECT ELECTRICAL SYSTEM	X				Y	N	
VERIFY PUMP OPERATION	X				Y	N	
WELL LEVELS - MANUALLY CHECK VWATER LEVEL VS. PLC DATA		X					
SAMPLING (SEE TABLE IN NPDES ATTACHMENTS)		X					
AIR STRIPPER - CHECK SOLIDS ACCUMULATION				X			
CHECK BAG FILTER PRESSURES	X				Y	N	
CHECK CARBON FILTER PRESSURES	X				Y	N	
AIR STRIPPER - CHECK BLOWER OPERATION AND PRESSURE DROP	X				Y	N	
AMP TRANSFER PUMP MOTORS				X			
TRANSFER PUMPS - PERFORM P.M. SERVICE				X			
AIR STRIPPER - MEASURE AIR FLOW, FULL INSPECTION				X			
CHECK & CALIBRATE INSTRUMENTATION				X			
MANUALLY OPERATE & CHECK VALVES				X			
MANUALLY TEST SAFETY INTERLOCKS			X				

Notes:

[1] Frequency that may be required is based on manufacturer data for the system equipment, system alarms, and Owner requirements

WELL ID	TIME	WATER LEVEL TOR	TOR ELEVATION	WATER ELEVATION TOR
MW-301D	1400	32.42	970.44	938.02
MW-414D	1354	33.70	971.91	938.21
MW-413D	1351	31.99	970.13	938.14
MW-416D	1348	27.74	965.84	938.10

VANDALIA-MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
TABLE 1 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 11-25-15
INSPECTION BY: ELS

	MINIMUM FREQUENCY		INSPECTED/	CORRECTIVE	
	EVERY WEEK	EVERY MONTH	TESTED (YES or NO)	MEASURES REQ'D (YES or NO)	COMMENTS
SITE SAFETY					
FIRST AID KIT	X		Y	N	
EYEWASH STATION	X		Y	N	
FIRE EXTINGUISHERS\SMOKE DETECTORS	X		Y	N	
EMERGENCY LIGHTING	X		Y	N	
SITE ISSUES	X		Y	N	
SITE SECURITY					
FENCING		X	Y	N	
GATES		X	Y	N	
LOCKS		X	Y	N	
SIGNS		X	Y	N	
SITE		X	Y	N	
SITE GROUNDS					
DRAINAGE DITCHES/SWALES		X	Y	N	
BUILDING		X	Y	N	
RECOVERY WELL		X	Y	N	
ACCESS ROAD		X	Y	N	
WASTE					
CARBON	X		Y	N	
SOLID	X		Y	N	

Notes:

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS MAINTENANCE PLAN
TABLE 2 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 11-25-15
INSPECTION BY: ECS

	EVERY WEEK	EVERY MONTH	EVERY 3 MONTHS	MIN. 6 MO. OR AS REQD(1)	INSPECTED/ TESTED (YES) OR (NO)	CORRECTIVE MEASURES REQ'D (YES or NO)	COMMENTS
GROUNDWATER SYSTEM							
VERIFY EQUIPMENT IS OPERATING WITH NO DAMAGE OR LEAKS	X				Y	N	
LOG SYSTEM OPERATING PARAMETERS	X				Y	N	
USE PLC TO CHECK SYSTEM OPERATING CONDITIONS	X				Y	N	
TEST LEVEL CONTROLS ETC.	X				Y	N	
USE PLC TO VERIFY DIAL OUT STATUS IS ENABLED	X				Y	N	
INSPECT CONTAINMENT SUMP/FLOOR SEAL	X				Y	N	
INSPECT BUILDING AND FOUNDATION INTEGRITY	X				Y	N	
INSPECT\VERIFY HEATING AND VENTILATING SYSTEM OPERATIONS				X			Test Trip Set Point and Clean Screens and Louvers
INSPECT\VISUALLY CHECK LIGHTING SYSTEM & EMERGENCY SYSTEM	X				Y	N	
VISUALLY INSPECT ELECTRICAL SYSTEM	X				Y	N	
VERIFY PUMP OPERATION	X				Y	N	
WELL LEVELS - MANUALLY CHECK VWATER LEVEL VS. PLC DATA		X			Y	N	
SAMPLING (SEE TABLE IN NPDES ATTACHMENTS)		X			Y	N	
AIR STRIPPER - CHECK SOLIDS ACCUMULATION				X			
CHECK BAG FILTER PRESSURES	X				Y	N	
CHECK CARBON FILTER PRESSURES	X				Y	N	
AIR STRIPPER - CHECK BLOWER OPERATION AND PRESSURE DROP	X				Y	N	
AMP TRANSFER PUMP MOTORS				X			
TRANSFER PUMPS - PERFORM P.M. SERVICE				X			
AIR STRIPPER - MEASURE AIR FLOW, FULL INSPECTION				X			
CHECK & CALIBRATE INSTRUMENTATION				X			
MANUALLY OPERATE & CHECK VALVES				X			
MANUALLY TEST SAFETY INTERLOCKS			X				

Notes:

[1] Frequency that may be required is based on manufacturer data for the system equipment, system alarms, and Owner requirements

WELL ID	TIME	WATER LEVEL TOR	TOR ELEVATION	WATER ELEVATION TOR
MW-301D	10:27	33.04	970.44	937.40
MW-414D	10:24	34.44	971.91	937.47
MW-413D	10:20	32.67	970.13	937.46
MW-416D	10:09	28.39	965.84	937.45

* WATER LEVELS COLLECTED 11/24/15 *

VANDALIA-MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
TABLE 1 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 12-4-15
INSPECTION BY: ELS

	MINIMUM FREQUENCY		INSPECTED/	CORRECTIVE	
	EVERY WEEK	EVERY MONTH	TESTED (YES or NO)	MEASURES REQ'D (YES or NO)	COMMENTS
SITE SAFETY					
FIRST AID KIT	X		Y	N	
EYEWASH STATION	X		Y	N	
FIRE EXTINGUISHERS\SMOKE DETECTORS	X		Y	N	
EMERGENCY LIGHTING	X		Y	N	
SITE ISSUES	X		Y	N	
SITE SECURITY					
FENCING		X			
GATES		X			
LOCKS		X			
SIGNS		X			
SITE		X			
SITE GROUNDS					
DRAINAGE DITCHES/SWALES		X			
BUILDING		X			
RECOVERY WELL		X			
ACCESS ROAD		X			
WASTE					
CARBON	X		Y	N	
SOLID	X		Y	N	

Notes:

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS MAINTENANCE PLAN
TABLE 2 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 12-4-15
INSPECTION BY: GLS

	EVERY WEEK	EVERY MONTH	EVERY 3 MONTHS	MIN. 6 MO. OR AS REQD(1)	INSPECTED/ TESTED (YES) OR (NO)	CORRECTIVE MEASURES REQ'D (YES or NO)	COMMENTS
GROUNDWATER SYSTEM							
VERIFY EQUIPMENT IS OPERATING WITH NO DAMAGE OR LEAKS	X				Y	N	
LOG SYSTEM OPERATING PARAMETERS	X				Y	N	
USE PLC TO CHECK SYSTEM OPERATING CONDITIONS	X				Y	N	
TEST LEVEL CONTROLS ETC.	X				Y	N	
USE PLC TO VERIFY DIAL OUT STATUS IS ENABLED	X				Y	N	
INSPECT CONTAINMENT SUMP/FLOOR SEAL	X				Y	N	
INSPECT BUILDING AND FOUNDATION INTEGRITY	X				Y	N	
INSPECT\VERIFY HEATING AND VENTILATING SYSTEM OPERATIONS				X			Test Trip Set Point and Clean Screens and Louvers
INSPECT\VISUALLY CHECK LIGHTING SYSTEM & EMERGENCY SYSTEM	X				Y	N	
VISUALLY INSPECT ELECTRICAL SYSTEM	X				Y	N	
VERIFY PUMP OPERATION	X				Y	N	
WELL LEVELS - MANUALLY CHECK VWATER LEVEL VS. PLC DATA		X					
SAMPLING (SEE TABLE IN NPDES ATTACHMENTS)		X					
AIR STRIPPER - CHECK SOLIDS ACCUMULATION				X			
CHECK BAG FILTER PRESSURES	X				Y	N	
CHECK CARBON FILTER PRESSURES	X				Y	N	
AIR STRIPPER - CHECK BLOWER OPERATION AND PRESSURE DROP	X				Y	N	
AMP TRANSFER PUMP MOTORS				X			
TRANSFER PUMPS - PERFORM P.M. SERVICE				X			
AIR STRIPPER - MEASURE AIR FLOW, FULL INSPECTION				X			
CHECK & CALIBRATE INSTRUMENTATION				X			
MANUALLY OPERATE & CHECK VALVES				X			
MANUALLY TEST SAFETY INTERLOCKS			X				

Notes:

[1] Frequency that may be required is based on manufacturer data for the system equipment, system alarms, and Owner requirements

WELL ID	TIME	WATER LEVEL TOR	TOR ELEVATION	WATER ELEVATION TOR
MW-301D	1442	33.79	970.44	936.65
MW-414D	1436	35.12	971.91	936.79
MW-413D	1430	33.41	970.13	936.72
MW-416D	1424	29.16	965.84	936.68

VANDALIA-MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
TABLE 1 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 12/11/15
INSPECTION BY: Mike Rasmussen

	MINIMUM FREQUENCY		INSPECTED/	CORRECTIVE	
	EVERY WEEK	EVERY MONTH	TESTED (YES or NO)	MEASURES REQ'D (YES or NO)	COMMENTS
SITE SAFETY					
FIRST AID KIT	X	✓	Y	N	
EYEWASH STATION	X		Y	N	
FIRE EXTINGUISHERS\SMOKE DETECTORS	X		Y	N	
EMERGENCY LIGHTING	X		Y	N	
SITE ISSUES	X		Y	N	
SITE SECURITY					
FENCING		X	Y	N	
GATES		X	Y	N	
LOCKS		X	Y	N	
SIGNS		X	Y	N	
SITE		X	Y	N	
SITE GROUNDS					
DRAINAGE DITCHES/SWALES		X	Y	N	
BUILDING		X	Y	N	
RECOVERY WELL		X	Y	N	
ACCESS ROAD		X	Y	N	
WASTE					
CARBON	X		Y	N	
SOLID	X		Y	N	

Notes:

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS MAINTENANCE PLAN
TABLE 2 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 12.11.15
INSPECTION BY: M. Rasmussen

	EVERY WEEK	EVERY MONTH	EVERY 3 MONTHS	MIN. 6 MO. OR AS REQD(1)	INSPECTED/ TESTED (YES) OR (NO)	CORRECTIVE MEASURES REQ'D (YES or NO)	COMMENTS
GROUNDWATER SYSTEM					Y	N	
VERIFY EQUIPMENT IS OPERATING WITH NO DAMAGE OR LEAKS	x				Y	N	
LOG SYSTEM OPERATING PARAMETERS	x				Y	N	
USE PLC TO CHECK SYSTEM OPERATING CONDITIONS	x				Y	N	
TEST LEVEL CONTROLS ETC.	x				Y	N	
USE PLC TO VERIFY DIAL OUT STATUS IS ENABLED	x				Y	N	
INSPECT CONTAINMENT SUMP/FLOOR SEAL	x				Y	N	
INSPECT BUILDING AND FOUNDATION INTEGRITY	x				Y	N	
INSPECT\VERIFY HEATING AND VENTILATING SYSTEM OPERATIONS				x	Y	N	Test Trip Set Point and Clean Screens and Louvers
INSPECT\VISUALLY CHECK LIGHTING SYSTEM & EMERGENCY SYSTEM	x				Y	N	
VISUALLY INSPECT ELECTRICAL SYSTEM	x				Y	N	
VERIFY PUMP OPERATION	x				Y	N	
WELL LEVELS - MANUALLY CHECK VWATER LEVEL VS. PLC DATA		x			N	N	
SAMPLING (SEE TABLE IN NPDES ATTACHMENTS)		x			N	N	
AIR STRIPPER - CHECK SOLIDS ACCUMULATION				x	N	N	
CHECK BAG FILTER PRESSURES	x				Y	N	
CHECK CARBON FILTER PRESSURES	x				Y	Y	
AIR STRIPPER - CHECK BLOWER OPERATION AND PRESSURE DROP	x				Y	N	
AMP TRANSFER PUMP MOTORS				x	N	N	
TRANSFER PUMPS - PERFORM P.M. SERVICE				x	N	N	
AIR STRIPPER - MEASURE AIR FLOW, FULL INSPECTION				x	N	N	
CHECK & CALIBRATE INSTRUMENTATION				x	N	N	
MANUALLY OPERATE & CHECK VALVES				x	N	N	
MANUALLY TEST SAFETY INTERLOCKS			x		N	N	

Notes:

[1] Frequency that may be required is based on manufacturer data for the system equipment, system alarms, and Owner requirements

WELL ID	TIME	WATER LEVEL TOR	TOR ELEVATION	WATER ELEVATION TOR
MW-301D	11:15	33.37	970.44	937.07
MW-414D	11:25	34.60	971.91	937.31
MW-413D	11:40	32.90	970.13	937.23
MW-416D	12:00	28.66	965.84	937.18

VANDALIA-MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
TABLE 1 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 12/18/15
INSPECTION BY: Mike Rasmussen

	MINIMUM FREQUENCY		INSPECTED/	CORRECTIVE	
	EVERY WEEK	EVERY MONTH	TESTED (YES or NO)	MEASURES REQ'D (YES or NO)	COMMENTS
SITE SAFETY					
FIRST AID KIT	X		Y	N	
EYEWASH STATION	X		Y	N	
FIRE EXTINGUISHERS\SMOKE DETECTORS	X		Y	N	
EMERGENCY LIGHTING	X		Y	N	
SITE ISSUES	X		Y	N	
SITE SECURITY					
FENCING		X	Y	N	
GATES		X	Y	N	
LOCKS		X	Y	N	
SIGNS		X	Y	N	
SITE		X	Y	N	
SITE GROUNDS					
DRAINAGE DITCHES/SWALES		X	N	N	
BUILDING		X	N	N	
RECOVERY WELL		X	N	N	
ACCESS ROAD		X	N	N	
WASTE					
CARBON	X		Y	N	
SOLID	X		Y	N	

Notes:

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS MAINTENANCE PLAN
TABLE 2 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 12/18/15
INSPECTION BY: Mike Rasmussen

	EVERY WEEK	EVERY MONTH	EVERY 3 MONTHS	MIN. 6 MO. OR AS REQD(1)	INSPECTED/ TESTED (YES) OR (NO)	CORRECTIVE MEASURES REQ'D (YES or NO)	COMMENTS
GROUNDWATER SYSTEM							
VERIFY EQUIPMENT IS OPERATING WITH NO DAMAGE OR LEAKS	X				Y	N	
LOG SYSTEM OPERATING PARAMETERS	X				Y	N	
USE PLC TO CHECK SYSTEM OPERATING CONDITIONS	X				Y	N	
TEST LEVEL CONTROLS ETC.	X				Y	N	
USE PLC TO VERIFY DIAL OUT STATUS IS ENABLED	X				Y	N	
INSPECT CONTAINMENT SUMP/FLOOR SEAL	X				Y	N	
INSPECT BUILDING AND FOUNDATION INTEGRITY	X				Y	N	
INSPECT\VERIFY HEATING AND VENTILATING SYSTEM OPERATIONS				X			Test Trip Set Point and Clean Screens and Louvers
INSPECT\VISUALLY CHECK LIGHTING SYSTEM & EMERGENCY SYSTEM	X				Y	N	
VISUALLY INSPECT ELECTRICAL SYSTEM	X				Y	N	
VERIFY PUMP OPERATION	X				Y	N	
WELL LEVELS - MANUALLY CHECK VWATER LEVEL VS. PLC DATA		X			Y	N	
SAMPLING (SEE TABLE IN NPDES ATTACHMENTS)		X			N	N	
AIR STRIPPER - CHECK SOLIDS ACCUMULATION				X	N	N	
CHECK BAG FILTER PRESSURES	X				Y	N	
CHECK CARBON FILTER PRESSURES	X				Y	N	
AIR STRIPPER - CHECK BLOWER OPERATION AND PRESSURE DROP	X				Y	N	
AMP TRANSFER PUMP MOTORS				X	N	N	
TRANSFER PUMPS - PERFORM P.M. SERVICE				X	N	N	
AIR STRIPPER - MEASURE AIR FLOW, FULL INSPECTION				X	N	N	
CHECK & CALIBRATE INSTRUMENTATION				X	N	N	
MANUALLY OPERATE & CHECK VALVES				X	N	N	
MANUALLY TEST SAFETY INTERLOCKS			X		N	N	

Notes:

[1] Frequency that may be required is based on manufacturer data for the system equipment, system alarms, and Owner requirements

WELL ID	TIME	WATER LEVEL TOR	TOR ELEVATION	WATER ELEVATION TOR
MW-301D		33.73	970.44	936.71
MW-414D		35.03	971.91	936.88
MW-413D		33.35	970.13	936.78
MW-416D		29.09	965.84	936.75

VANDALIA-MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
TABLE 1 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 12/24/15
INSPECTION BY: RP

	MINIMUM FREQUENCY		INSPECTED/	CORRECTIVE	
	EVERY WEEK	EVERY MONTH	TESTED (YES or NO)	MEASURES REQ'D (YES or NO)	COMMENTS
SITE SAFETY					
FIRST AID KIT	X		✓	✓	
EYEWASH STATION	X		✓	✓	
FIRE EXTINGUISHERS\SMOKE DETECTORS	X		✓	✓	
EMERGENCY LIGHTING	X		✓	✓	
SITE ISSUES	X		✓	✓	
SITE SECURITY					
FENCING		X			
GATES		X			
LOCKS		X			
SIGNS		X			
SITE		X			
SITE GROUNDS					
DRAINAGE DITCHES/SWALES		X			
BUILDING		X			
RECOVERY WELL		X			
ACCESS ROAD		X			
WASTE					
CARBON	X		✓	✓	
SOLID	X		✓	✓	

Notes:

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS MAINTENANCE PLAN
TABLE 2 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 12/24/15
INSPECTION BY: RP

	EVERY WEEK	EVERY MONTH	EVERY 3 MONTHS	MIN. 6 MO. OR AS REQD(1)	INSPECTED/ TESTED (YES) OR (NO)	CORRECTIVE MEASURES REQ'D (YES or NO)	COMMENTS
GROUNDWATER SYSTEM							
VERIFY EQUIPMENT IS OPERATING WITH NO DAMAGE OR LEAKS	X				Y	N	
LOG SYSTEM OPERATING PARAMETERS	X				Y	N	
USE PLC TO CHECK SYSTEM OPERATING CONDITIONS	X				Y	N	
TEST LEVEL CONTROLS ETC.	X				Y	N	
USE PLC TO VERIFY DIAL OUT STATUS IS ENABLED	X				Y	N	
INSPECT CONTAINMENT SUMP/FLOOR SEAL	X				Y	N	
INSPECT BUILDING AND FOUNDATION INTEGRITY	X				Y	N	
INSPECT\VERIFY HEATING AND VENTILATING SYSTEM OPERATIONS				X			Test Trip Set Point and Clean Screens and Louvers
INSPECT\VISUALLY CHECK LIGHTING SYSTEM & EMERGENCY SYSTEM	X				Y	N	
VISUALLY INSPECT ELECTRICAL SYSTEM	X				Y	N	
VERIFY PUMP OPERATION	X				Y	N	
WELL LEVELS - MANUALLY CHECK VWATER LEVEL VS. PLC DATA		X					
SAMPLING (SEE TABLE IN NPDES ATTACHMENTS)		X					
AIR STRIPPER - CHECK SOLIDS ACCUMULATION				X			
CHECK BAG FILTER PRESSURES	X				Y	N	
CHECK CARBON FILTER PRESSURES	X				Y	N	
AIR STRIPPER - CHECK BLOWER OPERATION AND PRESSURE DROP	X				Y	N	
AMP TRANSFER PUMP MOTORS				X			
TRANSFER PUMPS - PERFORM P.M. SERVICE				X			
AIR STRIPPER - MEASURE AIR FLOW, FULL INSPECTION				X			
CHECK & CALIBRATE INSTRUMENTATION				X			
MANUALLY OPERATE & CHECK VALVES				X			
MANUALLY TEST SAFETY INTERLOCKS			X				

Notes:

[1] Frequency that may be required is based on manufacturer data for the system equipment, system alarms, and Owner requirements

WELL ID	TIME	WATER LEVEL TOR	TOR ELEVATION	WATER ELEVATION TOR
MW-301D			970.44	
MW-414D			971.91	
MW-413D			970.13	
MW-416D			965.84	

(*) WLs not Recorded. MW-301D Submerged due to Recent Rain event.

VANDALIA-MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
TABLE 1 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 1/2/16
INSPECTION BY: WJR

	MINIMUM FREQUENCY		INSPECTED/	CORRECTIVE	
	EVERY WEEK	EVERY MONTH	TESTED (YES or NO)	MEASURES REQ'D (YES or NO)	COMMENTS
SITE SAFETY					
FIRST AID KIT	X		Y	N	
EYEWASH STATION	X		Y	N	
FIRE EXTINGUISHERS\SMOKE DETECTORS	X		Y	N	
EMERGENCY LIGHTING	X		Y	N	
SITE ISSUES	X		Y	N	
SITE SECURITY					
FENCING		X			
GATES		X			
LOCKS		X			
SIGNS		X			
SITE		X			
SITE GROUNDS					
DRAINAGE DITCHES/SWALES		X			
BUILDING		X			
RECOVERY WELL		X			
ACCESS ROAD		X			
WASTE					
CARBON	X		Y	N	
SOLID	X		Y	N	

Notes:

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS MAINTENANCE PLAN
TABLE 2 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 1/2/16
INSPECTION BY: WJR

	EVERY WEEK	EVERY MONTH	EVERY 3 MONTHS	MIN. 6 MO. OR AS REQD(1)	INSPECTED/ TESTED (YES) OR (NO)	CORRECTIVE MEASURES REQ'D (YES or NO)	COMMENTS
GROUNDWATER SYSTEM					Y	N	
VERIFY EQUIPMENT IS OPERATING WITH NO DAMAGE OR LEAKS	X				Y	N	
LOG SYSTEM OPERATING PARAMETERS	X				Y	N	
USE PLC TO CHECK SYSTEM OPERATING CONDITIONS	X				Y	N	
TEST LEVEL CONTROLS ETC.	X				Y	N	
USE PLC TO VERIFY DIAL OUT STATUS IS ENABLED	X				Y	N	
INSPECT CONTAINMENT SUMP/FLOOR SEAL	X				Y	N	
INSPECT BUILDING AND FOUNDATION INTEGRITY	X				Y	N	
INSPECT\VERIFY HEATING AND VENTILATING SYSTEM OPERATIONS				X			Test Trip Set Point and Clean Screens and Louvers
INSPECT\VISUALLY CHECK LIGHTING SYSTEM & EMERGENCY SYSTEM	X				Y	N	
VISUALLY INSPECT ELECTRICAL SYSTEM	X				Y	N	
VERIFY PUMP OPERATION	X				Y	N	
WELL LEVELS - MANUALLY CHECK VWATER LEVEL VS. PLC DATA		X					
SAMPLING (SEE TABLE IN NPDES ATTACHMENTS)		X					
AIR STRIPPER - CHECK SOLIDS ACCUMULATION				X			
CHECK BAG FILTER PRESSURES	X				Y	N	
CHECK CARBON FILTER PRESSURES	X				Y	N	
AIR STRIPPER - CHECK BLOWER OPERATION AND PRESSURE DROP	X				Y	N	
AMP TRANSFER PUMP MOTORS				X			
TRANSFER PUMPS - PERFORM P.M. SERVICE				X			
AIR STRIPPER - MEASURE AIR FLOW, FULL INSPECTION				X			
CHECK & CALIBRATE INSTRUMENTATION				X			
MANUALLY OPERATE & CHECK VALVES				X			
MANUALLY TEST SAFETY INTERLOCKS			X				

Notes:

[1] Frequency that may be required is based on manufacturer data for the system equipment, system alarms, and Owner requirements

WELL ID	TIME	WATER LEVEL TOR	TOR ELEVATION	WATER ELEVATION TOR
MW-301D	16:57	27.79	970.44	942.65
MW-414D	16:44	29.07	971.91	942.84
MW-413D	16:28	27.36	970.13	942.77
MW-416D	16:35	23.07	965.84	942.77

VANDALIA-MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
TABLE 1 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 1-8-16
INSPECTION BY: ELS

	MINIMUM FREQUENCY		INSPECTED/	CORRECTIVE	
	EVERY WEEK	EVERY MONTH	TESTED (YES or NO)	MEASURES REQ'D (YES or NO)	COMMENTS
SITE SAFETY					
FIRST AID KIT	X		Y	N	
EYEWASH STATION	X		Y	N	
FIRE EXTINGUISHERS\SMOKE DETECTORS	X		Y	N	
EMERGENCY LIGHTING	X		Y	N	
SITE ISSUES	X		Y	N	
SITE SECURITY					
FENCING		X			
GATES		X			
LOCKS		X			
SIGNS		X			
SITE		X			
SITE GROUNDS					
DRAINAGE DITCHES/SWALES		X			
BUILDING		X			
RECOVERY WELL		X			
ACCESS ROAD		X			
WASTE					
CARBON	X		Y	N	
SOLID	X		Y	N	

Notes:

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS MAINTENANCE PLAN
TABLE 2 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 1-8-16
INSPECTION BY: ELS

	EVERY WEEK	EVERY MONTH	EVERY 3 MONTHS	MIN. 6 MO. OR AS REQD(1)	INSPECTED/ TESTED (YES) OR (NO)	CORRECTIVE MEASURES REQ'D (YES or NO)	COMMENTS
GROUNDWATER SYSTEM							
VERIFY EQUIPMENT IS OPERATING WITH NO DAMAGE OR LEAKS	X				Y	N	
LOG SYSTEM OPERATING PARAMETERS	X				Y	N	
USE PLC TO CHECK SYSTEM OPERATING CONDITIONS	X				Y	N	
TEST LEVEL CONTROLS ETC.	X				Y	N	
USE PLC TO VERIFY DIAL OUT STATUS IS ENABLED	X				Y	N	
INSPECT CONTAINMENT SUMP/FLOOR SEAL	X				Y	N	
INSPECT BUILDING AND FOUNDATION INTEGRITY	X				Y	N	
INSPECT\VERIFY HEATING AND VENTILATING SYSTEM OPERATIONS				X			Test Trip Set Point and Clean Screens and Louvers
INSPECT\VISUALLY CHECK LIGHTING SYSTEM & EMERGENCY SYSTEM	X				Y	N	
VISUALLY INSPECT ELECTRICAL SYSTEM	X				Y	N	
VERIFY PUMP OPERATION	X				Y	N	
WELL LEVELS - MANUALLY CHECK VWATER LEVEL VS. PLC DATA		X					
SAMPLING (SEE TABLE IN NPDES ATTACHMENTS)		X					
AIR STRIPPER - CHECK SOLIDS ACCUMULATION				X			
CHECK BAG FILTER PRESSURES	X				Y	N	
CHECK CARBON FILTER PRESSURES	X				Y	N	
AIR STRIPPER - CHECK BLOWER OPERATION AND PRESSURE DROP	X				Y	N	
AMP TRANSFER PUMP MOTORS				X			
TRANSFER PUMPS - PERFORM P.M. SERVICE				X			
AIR STRIPPER - MEASURE AIR FLOW, FULL INSPECTION				X			
CHECK & CALIBRATE INSTRUMENTATION				X			
MANUALLY OPERATE & CHECK VALVES				X			
MANUALLY TEST SAFETY INTERLOCKS			X				

Notes:

[1] Frequency that may be required is based on manufacturer data for the system equipment, system alarms, and Owner requirements

WELL ID	TIME	WATER LEVEL TOR	TOR ELEVATION	WATER ELEVATION TOR
MW-301D			970.44	
MW-414D			971.91	
MW-413D			970.13	
MW-416D			965.84	

* Water levels not recorded MW-301D submerged due to recent rain event.

VANDALIA-MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
TABLE 1 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 1/12/16
INSPECTION BY: M. Rasmussen

	MINIMUM FREQUENCY		INSPECTED/	CORRECTIVE	
	EVERY WEEK	EVERY MONTH	TESTED (YES or NO)	MEASURES REQ'D (YES or NO)	COMMENTS
SITE SAFETY					
FIRST AID KIT	X		✓	N	
EYEWASH STATION	X		✓	N	
FIRE EXTINGUISHERS\SMOKE DETECTORS	X		✓	N	
EMERGENCY LIGHTING	X		✓	N	
SITE ISSUES	X		✓	N	
SITE SECURITY					
FENCING		X	✓	N	
GATES		X	✓	N	
LOCKS		X	✓	N	
SIGNS		X	✓	N	
SITE		X	✓	N	
SITE GROUNDS					
DRAINAGE DITCHES/SWALES		X			
BUILDING		X			
RECOVERY WELL		X			
ACCESS ROAD		X			
WASTE					
CARBON	X		✓	N	
SOLID	X		✓	N	

Notes:

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS MAINTENANCE PLAN
TABLE 2 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 1/12/16
INSPECTION BY: M. Rasmussen

	EVERY WEEK	EVERY MONTH	EVERY 3 MONTHS	MIN. 6 MO. OR AS REQD(1)	INSPECTED/ TESTED (YES) OR (NO)	CORRECTIVE MEASURES REQ'D (YES or NO)	COMMENTS
GROUNDWATER SYSTEM					Y	N	
VERIFY EQUIPMENT IS OPERATING WITH NO DAMAGE OR LEAKS	X				Y	N	
LOG SYSTEM OPERATING PARAMETERS	X				Y	N	
USE PLC TO CHECK SYSTEM OPERATING CONDITIONS	X				Y	N	
TEST LEVEL CONTROLS ETC.	X				Y	N	
USE PLC TO VERIFY DIAL OUT STATUS IS ENABLED	X				Y	N	
INSPECT CONTAINMENT SUMP/FLOOR SEAL	X				Y	N	
INSPECT BUILDING AND FOUNDATION INTEGRITY	X				Y	N	
INSPECT\VERIFY HEATING AND VENTILATING SYSTEM OPERATIONS				X			Test Trip Set Point and Clean Screens and Louvers
INSPECT\VISUALLY CHECK LIGHTING SYSTEM & EMERGENCY SYSTEM	X				Y	N	
VISUALLY INSPECT ELECTRICAL SYSTEM	X				Y	N	
VERIFY PUMP OPERATION	X				Y	N	
WELL LEVELS - MANUALLY CHECK VWATER LEVEL VS. PLC DATA		X					
SAMPLING (SEE TABLE IN NPDES ATTACHMENTS)		X					
AIR STRIPPER - CHECK SOLIDS ACCUMULATION				X			
CHECK BAG FILTER PRESSURES	X				Y	N	
CHECK CARBON FILTER PRESSURES	X				Y	N	
AIR STRIPPER - CHECK BLOWER OPERATION AND PRESSURE DROP	X				Y	N	
AMP TRANSFER PUMP MOTORS				X			
TRANSFER PUMPS - PERFORM P.M. SERVICE				X			
AIR STRIPPER - MEASURE AIR FLOW, FULL INSPECTION				X			
CHECK & CALIBRATE INSTRUMENTATION				X			
MANUALLY OPERATE & CHECK VALVES				X			
MANUALLY TEST SAFETY INTERLOCKS			X				

Notes:

[1] Frequency that may be required is based on manufacturer data for the system equipment, system alarms, and Owner requirements

WELL ID	TIME	WATER LEVEL TOR	TOR ELEVATION	WATER ELEVATION TOR
MW-301D	11:20	28.77	970.44	941.67
MW-414D	11:10	29.90	971.91	942.01
MW-413D	11:25	28.22	970.13	941.91
MW-416D	11:40	23.92	965.84	941.92

VANDALIA-MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
TABLE 1 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 1/21/16
INSPECTION BY: DP

	MINIMUM FREQUENCY		INSPECTED/	CORRECTIVE	
	EVERY WEEK	EVERY MONTH	TESTED (YES or NO)	MEASURES REQ'D (YES or NO)	COMMENTS
SITE SAFETY					
FIRST AID KIT	X		Y	N	
EYEWASH STATION	X		Y		Needs to be Refreshed.
FIRE EXTINGUISHERS\SMOKE DETECTORS	X		Y	N	
EMERGENCY LIGHTING	X		Y	N	
SITE ISSUES	X		Y	N	
SITE SECURITY					
FENCING		X			
GATES		X			
LOCKS		X			
SIGNS		X			
SITE		X			
SITE GROUNDS					
DRAINAGE DITCHES/SWALES		X			
BUILDING		X			
RECOVERY WELL		X			
ACCESS ROAD		X			
WASTE					
CARBON	X		Y	N	
SOLID	X		Y	N	

Notes:

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS MAINTENANCE PLAN
TABLE 2 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 1/21/16
INSPECTION BY: RP

	EVERY WEEK	EVERY MONTH	EVERY 3 MONTHS	MIN. 6 MO. OR AS REQD(1)	INSPECTED/ TESTED (YES) OR (NO)	CORRECTIVE MEASURES REQ'D (YES or NO)	COMMENTS
GROUNDWATER SYSTEM							
VERIFY EQUIPMENT IS OPERATING WITH NO DAMAGE OR LEAKS	X				Y	N	
LOG SYSTEM OPERATING PARAMETERS	X				Y	N	
USE PLC TO CHECK SYSTEM OPERATING CONDITIONS	X				Y	N	
TEST LEVEL CONTROLS ETC.	X				Y	N	
USE PLC TO VERIFY DIAL OUT STATUS IS ENABLED	X				Y	N	
INSPECT CONTAINMENT SUMP/FLOOR SEAL	X				Y	N	
INSPECT BUILDING AND FOUNDATION INTEGRITY	X				Y	N	
INSPECT\VERIFY HEATING AND VENTILATING SYSTEM OPERATIONS				X			Test Trip Set Point and Clean Screens and Louvers
INSPECT\VISUALLY CHECK LIGHTING SYSTEM & EMERGENCY SYSTEM	X				Y	N	
VISUALLY INSPECT ELECTRICAL SYSTEM	X				Y	N	
VERIFY PUMP OPERATION	X				Y	N	
WELL LEVELS - MANUALLY CHECK VWATER LEVEL VS. PLC DATA		X					
SAMPLING (SEE TABLE IN NPDES ATTACHMENTS)		X					
AIR STRIPPER - CHECK SOLIDS ACCUMULATION				X			
CHECK BAG FILTER PRESSURES	X				Y	N	
CHECK CARBON FILTER PRESSURES	X				Y	N	
AIR STRIPPER - CHECK BLOWER OPERATION AND PRESSURE DROP	X				Y	N	
AMP TRANSFER PUMP MOTORS				X			
TRANSFER PUMPS - PERFORM P.M. SERVICE				X			
AIR STRIPPER - MEASURE AIR FLOW, FULL INSPECTION				X			
CHECK & CALIBRATE INSTRUMENTATION				X			
MANUALLY OPERATE & CHECK VALVES				X			
MANUALLY TEST SAFETY INTERLOCKS			X				

Notes:

[1] Frequency that may be required is based on manufacturer data for the system equipment, system alarms, and Owner requirements

WELL ID	TIME	WATER LEVEL TOR	TOR ELEVATION	WATER ELEVATION TOR
MW-301D	1330	28.80	970.44	941.64
MW-414D	1320	29.95	971.91	941.96
MW-413D	1360	28.32	970.13	941.81
MW-416D	1300	24.01	965.84	941.83

VANDALIA-MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
TABLE 1 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 1-29-16
INSPECTION BY: MR

	MINIMUM FREQUENCY		INSPECTED/	CORRECTIVE	
	EVERY WEEK	EVERY MONTH	TESTED (YES or NO)	MEASURES REQ'D (YES or NO)	COMMENTS
SITE SAFETY					
FIRST AID KIT	X		Y	N	
EYEWASH STATION	X		Y	Y	-Solution Needs to be Replaced
FIRE EXTINGUISHERS\SMOKE DETECTORS	X		Y	N	
EMERGENCY LIGHTING	X		Y	N	
SITE ISSUES	X		Y	N	
SITE SECURITY					
FENCING		X	Y	N	
GATES		X	Y	N	
LOCKS		X	Y	N	
SIGNS		X	Y	N	
SITE		X	Y	N	
SITE GROUNDS					
DRAINAGE DITCHES/SWALES		X	N	N	
BUILDING		X	N	N	
RECOVERY WELL		X	N	N	
ACCESS ROAD		X	N	N	
WASTE					
CARBON	X		Y	N	
SOLID	X		Y	N	

Notes:

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS MAINTENANCE PLAN
TABLE 2 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 1-29-14
INSPECTION BY: M.R.

	EVERY WEEK	EVERY MONTH	EVERY 3 MONTHS	MIN. 6 MO. OR AS REQD(1)	INSPECTED/ TESTED (YES) OR (NO)	CORRECTIVE MEASURES REQ'D (YES or NO)	COMMENTS
GROUNDWATER SYSTEM					Y		
VERIFY EQUIPMENT IS OPERATING WITH NO DAMAGE OR LEAKS	X				Y	N	- Small leak @ Effluent
LOG SYSTEM OPERATING PARAMETERS	X				Y	N	
USE PLC TO CHECK SYSTEM OPERATING CONDITIONS	X				Y	N	
TEST LEVEL CONTROLS ETC.	X				Y	N	
USE PLC TO VERIFY DIAL OUT STATUS IS ENABLED	X				Y	N	
INSPECT CONTAINMENT SUMP/FLOOR SEAL	X				Y	N	
INSPECT BUILDING AND FOUNDATION INTEGRITY	X				Y	N	
INSPECT\VERIFY HEATING AND VENTILATING SYSTEM OPERATIONS				X	N		Test Trip Set Point and Clean Screens and Louvers
INSPECT\VISUALLY CHECK LIGHTING SYSTEM & EMERGENCY SYSTEM	X				Y	N	
VISUALLY INSPECT ELECTRICAL SYSTEM	X				Y	N	
VERIFY PUMP OPERATION	X				Y	N	
WELL LEVELS - MANUALLY CHECK VWATER LEVEL VS. PLC DATA		X			N	N	
SAMPLING (SEE TABLE IN NPDES ATTACHMENTS)		X			N	N	
AIR STRIPPER - CHECK SOLIDS ACCUMULATION				X	N		
CHECK BAG FILTER PRESSURES	X				Y	N	
CHECK CARBON FILTER PRESSURES	X				Y	N	
AIR STRIPPER - CHECK BLOWER OPERATION AND PRESSURE DROP	X				Y	N	
AMP TRANSFER PUMP MOTORS				X	N	N	
TRANSFER PUMPS - PERFORM P.M. SERVICE				X	N	N	
AIR STRIPPER - MEASURE AIR FLOW, FULL INSPECTION				X	N	N	
CHECK & CALIBRATE INSTRUMENTATION				X	N	N	
MANUALLY OPERATE & CHECK VALVES				X	N	N	
MANUALLY TEST SAFETY INTERLOCKS			X		N	N	

Notes:

[1] Frequency that may be required is based on manufacturer data for the system equipment, system alarms, and Owner requirements

WELL ID	TIME	WATER LEVEL TOR	TOR ELEVATION	WATER ELEVATION TOR
MW-301D	16:00	30.30	970.44	940.14
MW-414D	15:55	31.75	971.91	940.16
MW-413D	16:10	[illegible] 29.95	970.13	940.18
MW-416D	16:20	25.61	965.84	940.23

VANDALIA-MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
TABLE 1 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 2/5/16
INSPECTION BY: RP

	MINIMUM FREQUENCY		INSPECTED/	CORRECTIVE	
	EVERY WEEK	EVERY MONTH	TESTED (YES or NO)	MEASURES REQ'D (YES or NO)	COMMENTS
SITE SAFETY					
FIRST AID KIT	X		Y	N	
EYEWASH STATION	X		Y	N	
FIRE EXTINGUISHERS\SMOKE DETECTORS	X		Y	Y	Eyewash needs replaced
EMERGENCY LIGHTING	X		Y	N	
SITE ISSUES	X		Y	N	
SITE SECURITY					
FENCING		X			
GATES		X			
LOCKS		X			
SIGNS		X			
SITE		X			
SITE GROUNDS					
DRAINAGE DITCHES/SWALES		X			
BUILDING		X			
RECOVERY WELL		X			
ACCESS ROAD		X			
WASTE					
CARBON	X		Y	N	
SOLID	X		Y	N	

Notes:

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS MAINTENANCE PLAN
TABLE 2 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 2/5/16
INSPECTION BY: RB

	EVERY WEEK	EVERY MONTH	EVERY 3 MONTHS	MIN. 6 MO. OR AS REQD(1)	INSPECTED/ TESTED (YES) OR (NO)	CORRECTIVE MEASURES REQ'D (YES or NO)	COMMENTS
GROUNDWATER SYSTEM							
VERIFY EQUIPMENT IS OPERATING WITH NO DAMAGE OR LEAKS	X				Y	N	
LOG SYSTEM OPERATING PARAMETERS	X				Y	N	
USE PLC TO CHECK SYSTEM OPERATING CONDITIONS	X				Y	N	
TEST LEVEL CONTROLS ETC.	X				Y	N	
USE PLC TO VERIFY DIAL OUT STATUS IS ENABLED	X				Y	N	
INSPECT CONTAINMENT SUMP/FLOOR SEAL	X				Y	N	
INSPECT BUILDING AND FOUNDATION INTEGRITY	X				Y	N	
INSPECT\VERIFY HEATING AND VENTILATING SYSTEM OPERATIONS				X			Test Trip Set Point and Clean Screens and Louvers
INSPECT\VISUALLY CHECK LIGHTING SYSTEM & EMERGENCY SYSTEM	X				Y	N	
VISUALLY INSPECT ELECTRICAL SYSTEM	X				Y	N	
VERIFY PUMP OPERATION	X				Y	N	
WELL LEVELS - MANUALLY CHECK VWATER LEVEL VS. PLC DATA		X					
SAMPLING (SEE TABLE IN NPDES ATTACHMENTS)		X					
AIR STRIPPER - CHECK SOLIDS ACCUMULATION				X	Y	N	
CHECK BAG FILTER PRESSURES	X				Y	N	
CHECK CARBON FILTER PRESSURES	X				Y	N	
AIR STRIPPER - CHECK BLOWER OPERATION AND PRESSURE DROP	X						
AMP TRANSFER PUMP MOTORS				X			
TRANSFER PUMPS - PERFORM P.M. SERVICE				X			
AIR STRIPPER - MEASURE AIR FLOW, FULL INSPECTION				X			
CHECK & CALIBRATE INSTRUMENTATION				X			
MANUALLY OPERATE & CHECK VALVES				X			
MANUALLY TEST SAFETY INTERLOCKS			X				

Notes:

[1] Frequency that may be required is based on manufacturer data for the system equipment, system alarms, and Owner requirements

WELL ID	TIME	WATER LEVEL TOR	TOR ELEVATION	WATER ELEVATION TOR
MW-301D	1400	29.23	970.44	941.21
MW-414D	1350	30.60	971.91	941.31
MW-413D	1340	28.90	970.13	941.23
MW-416D	1330	24.61	965.84	941.23

VANDALIA-MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
TABLE 1 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 2/12/16
INSPECTION BY: WJR

	MINIMUM FREQUENCY		INSPECTED/	CORRECTIVE	
	EVERY WEEK	EVERY MONTH	TESTED (YES or NO)	MEASURES REQ'D (YES or NO)	COMMENTS
SITE SAFETY					
FIRST AID KIT	X		Y	N	
EYEWASH STATION	X		Y	Y	Solution needs to be replaced
FIRE EXTINGUISHERS\SMOKE DETECTORS	X		Y	N	
EMERGENCY LIGHTING	X		Y	N	
SITE ISSUES	X		Y	N	
SITE SECURITY					
FENCING		X			
GATES		X			
LOCKS		X			
SIGNS		X			
SITE		X			
SITE GROUNDS					
DRAINAGE DITCHES/SWALES		X			
BUILDING		X			
RECOVERY WELL		X			
ACCESS ROAD		X			
WASTE					
CARBON	X		Y	N	
SOLID	X		Y	N	

Notes:

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS MAINTENANCE PLAN
TABLE 2 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 2/12/16
INSPECTION BY: WJR

	EVERY WEEK	EVERY MONTH	EVERY 3 MONTHS	MIN. 6 MO. OR AS REQD(1)	INSPECTED/ TESTED (YES) OR (NO)	CORRECTIVE MEASURES REQ'D (YES or NO)	COMMENTS
GROUNDWATER SYSTEM							
VERIFY EQUIPMENT IS OPERATING WITH NO DAMAGE OR LEAKS	X				Y	N	
LOG SYSTEM OPERATING PARAMETERS	X				Y	N	
USE PLC TO CHECK SYSTEM OPERATING CONDITIONS	X				Y	N	
TEST LEVEL CONTROLS ETC.	X				Y	N	
USE PLC TO VERIFY DIAL OUT STATUS IS ENABLED	X				Y	N	
INSPECT CONTAINMENT SUMP/FLOOR SEAL	X				Y	N	
INSPECT BUILDING AND FOUNDATION INTEGRITY	X				Y	N	
INSPECT\VERIFY HEATING AND VENTILATING SYSTEM OPERATIONS				X			Test Trip Set Point and Clean Screens and Louvers
INSPECT\VISUALLY CHECK LIGHTING SYSTEM & EMERGENCY SYSTEM	X				Y	N	
VISUALLY INSPECT ELECTRICAL SYSTEM	X				Y	N	
VERIFY PUMP OPERATION	X				Y	N	
WELL LEVELS - MANUALLY CHECK VWATER LEVEL VS. PLC DATA		X					
SAMPLING (SEE TABLE IN NPDES ATTACHMENTS)		X					
AIR STRIPPER - CHECK SOLIDS ACCUMULATION				X			
CHECK BAG FILTER PRESSURES	X				Y	N	
CHECK CARBON FILTER PRESSURES	X				Y	N	
AIR STRIPPER - CHECK BLOWER OPERATION AND PRESSURE DROP	X				Y	N	
AMP TRANSFER PUMP MOTORS				X			
TRANSFER PUMPS - PERFORM P.M. SERVICE				X			
AIR STRIPPER - MEASURE AIR FLOW, FULL INSPECTION				X			
CHECK & CALIBRATE INSTRUMENTATION				X			
MANUALLY OPERATE & CHECK VALVES				X			
MANUALLY TEST SAFETY INTERLOCKS			X				

Notes:

[1] Frequency that may be required is based on manufacturer data for the system equipment, system alarms, and Owner requirements

WELL ID	TIME	WATER LEVEL TOR	TOR ELEVATION	WATER ELEVATION TOR
MW-301D	1750	29.90	970.44	940.54
MW-414D	1710	31.18	971.91	940.73
MW-413D	1740	29.49	970.13	940.64
MW-416D	1720	25.23	965.84	940.61

VANDALIA-MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
TABLE 1 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 2-19-16
INSPECTION BY: M.R.

	MINIMUM FREQUENCY		INSPECTED/	CORRECTIVE	
	EVERY WEEK	EVERY MONTH	TESTED (YES or NO)	MEASURES REQ'D (YES or NO)	COMMENTS
SITE SAFETY					
FIRST AID KIT	X		Y	N	
EYEWASH STATION	X		Y	N	-changed Solution
FIRE EXTINGUISHERS\SMOKE DETECTORS	X		Y	N	
EMERGENCY LIGHTING	X		Y	N	
SITE ISSUES	X		Y	N	
SITE SECURITY					
FENCING		X	Y	N	
GATES		X	Y	N	
LOCKS		X	Y	N	
SIGNS		X	Y	N	
SITE		X	Y	N	
SITE GROUNDS					
DRAINAGE DITCHES/SWALES		X	Y	N	
BUILDING		X	Y	N	
RECOVERY WELL		X	Y	N	
ACCESS ROAD		X	Y	N	
WASTE					
CARBON	X		Y	N	
SOLID	X		Y	N	

Notes:

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS MAINTENANCE PLAN
TABLE 2 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 2/19/16
INSPECTION BY: M. Rasmussen

	EVERY WEEK	EVERY MONTH	EVERY 3 MONTHS	MIN. 6 MO. OR AS REQD(1)	INSPECTED/ TESTED (YES) OR (NO)	CORRECTIVE MEASURES REQ'D (YES or NO)	COMMENTS
GROUNDWATER SYSTEM					Y	Y	- Leak @ Effluent 1" T", Leak @ B.F. Lid, order new bolts & nuts
VERIFY EQUIPMENT IS OPERATING WITH NO DAMAGE OR LEAKS	X				Y	N	
LOG SYSTEM OPERATING PARAMETERS	X				Y	N	
USE PLC TO CHECK SYSTEM OPERATING CONDITIONS	X				Y	N	
TEST LEVEL CONTROLS ETC.	X				Y	N	
USE PLC TO VERIFY DIAL OUT STATUS IS ENABLED	X				Y	N	
INSPECT CONTAINMENT SUMP/FLOOR SEAL	X				Y	N	
INSPECT BUILDING AND FOUNDATION INTEGRITY	X				Y	N	
INSPECT\VERIFY HEATING AND VENTILATING SYSTEM OPERATIONS				X	N	N	Test Trip Set Point and Clean Screens and Louvers
INSPECT\VISUALLY CHECK LIGHTING SYSTEM & EMERGENCY SYSTEM	X				Y	N	
VISUALLY INSPECT ELECTRICAL SYSTEM	X				Y	N	
VERIFY PUMP OPERATION	X				N	N	
WELL LEVELS - MANUALLY CHECK VWATER LEVEL VS. PLC DATA		X			N	N	
SAMPLING (SEE TABLE IN NPDES ATTACHMENTS)		X			N	N	
AIR STRIPPER - CHECK SOLIDS ACCUMULATION				X	N	N	
CHECK BAG FILTER PRESSURES	X				Y	N	
CHECK CARBON FILTER PRESSURES	X				Y	N	
AIR STRIPPER - CHECK BLOWER OPERATION AND PRESSURE DROP	X				Y	N	
AMP TRANSFER PUMP MOTORS				X	N	N	
TRANSFER PUMPS - PERFORM P.M. SERVICE				X	N	N	
AIR STRIPPER - MEASURE AIR FLOW, FULL INSPECTION				X	N	N	
CHECK & CALIBRATE INSTRUMENTATION				X	N	N	
MANUALLY OPERATE & CHECK VALVES				X	N	N	
MANUALLY TEST SAFETY INTERLOCKS			X		N	N	

Notes:

[1] Frequency that may be required is based on manufacturer data for the system equipment, system alarms, and Owner requirements

WELL ID	TIME	WATER LEVEL TOR	TOR ELEVATION	WATER ELEVATION TOR
MW-301D	10:50	30.39	970.44	940.05
MW-414D	10:00	31.72	971.91	940.19
MW-413D	10:12	30.03	970.13	940.08
MW-416D	10:20	24.78	965.84	941.06

VANDALIA-MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
TABLE 1 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 2-26-16
INSPECTION BY: MR

	MINIMUM FREQUENCY		INSPECTED/	CORRECTIVE	
	EVERY WEEK	EVERY MONTH	TESTED (YES or NO)	MEASURES REQ'D (YES or NO)	COMMENTS
SITE SAFETY					
FIRST AID KIT	X		✓	N	
EYEWASH STATION	X		✓	N	
FIRE EXTINGUISHERS\SMOKE DETECTORS	X		✓	N	
EMERGENCY LIGHTING	X		✓	N	
SITE ISSUES	X		✓	N	
SITE SECURITY					
FENCING		X	✓	N	
GATES		X	✓	N	
LOCKS		X	✓	N	
SIGNS		X	✓	N	
SITE		X	✓	N	
SITE GROUNDS					
DRAINAGE DITCHES/SWALES		X	✓	N	
BUILDING		X	✓	N	
RECOVERY WELL		X	✓	N	
ACCESS ROAD		X	✓	N	
WASTE					
CARBON	X		✓	N	
SOLID	X		✓	N	

Notes:

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS MAINTENANCE PLAN
TABLE 2 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 2-26-16
INSPECTION BY: MR

	EVERY WEEK	EVERY MONTH	EVERY 3 MONTHS	MIN. 6 MO. OR AS REQD(1)	INSPECTED/ TESTED (YES) OR (NO)	CORRECTIVE MEASURES REQ'D (YES or NO)	COMMENTS
GROUNDWATER SYSTEM							
VERIFY EQUIPMENT IS OPERATING WITH NO DAMAGE OR LEAKS	X				Y	N	Replaced Bolt on B.F. Housing
LOG SYSTEM OPERATING PARAMETERS	X				Y	N	
USE PLC TO CHECK SYSTEM OPERATING CONDITIONS	X				Y	N	
TEST LEVEL CONTROLS ETC.	X				Y	N	
USE PLC TO VERIFY DIAL OUT STATUS IS ENABLED	X				Y	N	
INSPECT CONTAINMENT SUMP/FLOOR SEAL	X				Y	N	
INSPECT BUILDING AND FOUNDATION INTEGRITY	X				Y	N	
INSPECT\VERIFY HEATING AND VENTILATING SYSTEM OPERATIONS				X	N	Y	Test Trip Set Point and Clean Screens and Louvers
INSPECT\VISUALLY CHECK LIGHTING SYSTEM & EMERGENCY SYSTEM	X				Y	N	
VISUALLY INSPECT ELECTRICAL SYSTEM	X				Y	N	
VERIFY PUMP OPERATION	X				Y	N	
WELL LEVELS - MANUALLY CHECK VWATER LEVEL VS. PLC DATA		X			N	Y	
SAMPLING (SEE TABLE IN NPDES ATTACHMENTS)		X			N	-	
AIR STRIPPER - CHECK SOLIDS ACCUMULATION				X	N	-	
CHECK BAG FILTER PRESSURES	X				Y	N	
CHECK CARBON FILTER PRESSURES	X				Y	N	
AIR STRIPPER - CHECK BLOWER OPERATION AND PRESSURE DROP	X				Y	N	
AMP TRANSFER PUMP MOTORS				X	N	-	
TRANSFER PUMPS - PERFORM P.M. SERVICE				X	N	-	
AIR STRIPPER - MEASURE AIR FLOW, FULL INSPECTION				X	N	-	
CHECK & CALIBRATE INSTRUMENTATION				X	N	-	
MANUALLY OPERATE & CHECK VALVES				X	N	-	
MANUALLY TEST SAFETY INTERLOCKS			X		N	-	

Notes:

[1] Frequency that may be required is based on manufacturer data for the system equipment, system alarms, and Owner requirements

WELL ID	TIME	WATER LEVEL TOR	TOR ELEVATION	WATER ELEVATION TOR
MW-301D	16:30	25.80	970.44	944.64
MW-414D	16:35	27.25	971.91	944.66
MW-413D	16:40	25.45	970.13	944.68
MW-416D	16:45	21.15	965.84	944.69

VANDALIA-MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
TABLE 1 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 3-4-16
INSPECTION BY: RS

	MINIMUM FREQUENCY		INSPECTED/	CORRECTIVE	
	EVERY WEEK	EVERY MONTH	TESTED (YES or NO)	MEASURES REQ'D (YES or NO)	COMMENTS
SITE SAFETY					
FIRST AID KIT	X		Y	N	
EYEWASH STATION	X		Y	N	
FIRE EXTINGUISHERS\SMOKE DETECTORS	X		Y	N	
EMERGENCY LIGHTING	X		Y	N	
SITE ISSUES	X		Y	N	
SITE SECURITY					
FENCING		X			
GATES		X			
LOCKS		X			
SIGNS		X			
SITE		X			
SITE GROUNDS					
DRAINAGE DITCHES/SWALES		X			
BUILDING		X			
RECOVERY WELL		X			
ACCESS ROAD		X			
WASTE					
CARBON	X		Y	N	
SOLID	X		Y	N	

Notes:

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS MAINTENANCE PLAN
TABLE 2 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 3-4-16
INSPECTION BY: RS

	EVERY WEEK	EVERY MONTH	EVERY 3 MONTHS	MIN. 6 MO. OR AS REQD(1)	INSPECTED/ TESTED (YES) OR (NO)	CORRECTIVE MEASURES REQ'D (YES or NO)	COMMENTS
GROUNDWATER SYSTEM							
VERIFY EQUIPMENT IS OPERATING WITH NO DAMAGE OR LEAKS	X				✓	✓	
LOG SYSTEM OPERATING PARAMETERS	X				✓	✓	
USE PLC TO CHECK SYSTEM OPERATING CONDITIONS	X				✓	✓	
TEST LEVEL CONTROLS ETC.	X				✓	✓	
USE PLC TO VERIFY DIAL OUT STATUS IS ENABLED	X				✓	✓	
INSPECT CONTAINMENT SUMP/FLOOR SEAL	X				✓	✓	
INSPECT BUILDING AND FOUNDATION INTEGRITY	X				✓	✓	
INSPECT\VERIFY HEATING AND VENTILATING SYSTEM OPERATIONS				X			Test Trip Set Point and Clean Screens and Louvers
INSPECT\VISUALLY CHECK LIGHTING SYSTEM & EMERGENCY SYSTEM	X				✓	✓	
VISUALLY INSPECT ELECTRICAL SYSTEM	X				✓	✓	
VERIFY PUMP OPERATION	X				✓	✓	
WELL LEVELS - MANUALLY CHECK VWATER LEVEL VS. PLC DATA		X			✓		
SAMPLING (SEE TABLE IN NPDES ATTACHMENTS)		X					
AIR STRIPPER - CHECK SOLIDS ACCUMULATION				X			
CHECK BAG FILTER PRESSURES	X				✓	✓	
CHECK CARBON FILTER PRESSURES	X				✓	✓	
AIR STRIPPER - CHECK BLOWER OPERATION AND PRESSURE DROP	X				✓	✓	
AMP TRANSFER PUMP MOTORS				X	✓		
TRANSFER PUMPS - PERFORM P.M. SERVICE				X			
AIR STRIPPER - MEASURE AIR FLOW, FULL INSPECTION				X			
CHECK & CALIBRATE INSTRUMENTATION				X			
MANUALLY OPERATE & CHECK VALVES				X			
MANUALLY TEST SAFETY INTERLOCKS			X				

Notes:

[1] Frequency that may be required is based on manufacturer data for the system equipment, system alarms, and Owner requirements

WELL ID	TIME	WATER LEVEL TOR	TOR ELEVATION	WATER ELEVATION TOR
MW-301D		~~25.80~~	970.44	
MW-414D			971.91	
MW-413D			970.13	
MW-416D			965.84	

⊗ WLS not Recorded. Ground Saturated

VANDALIA-MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
TABLE 1 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 3-9-16
INSPECTION BY: RP

	MINIMUM FREQUENCY		INSPECTED/	CORRECTIVE	
	EVERY WEEK	EVERY MONTH	TESTED (YES or NO)	MEASURES REQ'D (YES or NO)	COMMENTS
SITE SAFETY					
FIRST AID KIT	X		Y	N	
EYEWASH STATION	X		Y	N	
FIRE EXTINGUISHERS\SMOKE DETECTORS	X		Y	N	
EMERGENCY LIGHTING	X		Y	N	
SITE ISSUES	X		Y	N	
SITE SECURITY					
FENCING		X			
GATES		X			
LOCKS		X			
SIGNS		X			
SITE		X			
SITE GROUNDS					
DRAINAGE DITCHES/SWALES		X			
BUILDING		X			
RECOVERY WELL		X			
ACCESS ROAD		X			
WASTE					
CARBON	X		Y	N	
SOLID	X		Y	N	

Notes:

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS MAINTENANCE PLAN
TABLE 2 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 3-9-16
INSPECTION BY: RP

	EVERY WEEK	EVERY MONTH	EVERY 3 MONTHS	MIN. 6 MO. OR AS REQD(1)	INSPECTED/ TESTED (YES) OR (NO)	CORRECTIVE MEASURES REQ'D (YES or NO)	COMMENTS
GROUNDWATER SYSTEM							
VERIFY EQUIPMENT IS OPERATING WITH NO DAMAGE OR LEAKS	X				Y	N	
LOG SYSTEM OPERATING PARAMETERS	X				Y	N	
USE PLC TO CHECK SYSTEM OPERATING CONDITIONS	X				Y	N	
TEST LEVEL CONTROLS ETC.	X				Y	N	
USE PLC TO VERIFY DIAL OUT STATUS IS ENABLED	X				Y	N	
INSPECT CONTAINMENT SUMP/FLOOR SEAL	X				Y	N	
INSPECT BUILDING AND FOUNDATION INTEGRITY	X				Y	N	
INSPECT\VERIFY HEATING AND VENTILATING SYSTEM OPERATIONS				X			Test Trip Set Point and Clean Screens and Louvers
INSPECT\VISUALLY CHECK LIGHTING SYSTEM & EMERGENCY SYSTEM	X				Y	N	
VISUALLY INSPECT ELECTRICAL SYSTEM	X				Y	N	
VERIFY PUMP OPERATION	X				Y	N	
WELL LEVELS - MANUALLY CHECK VWATER LEVEL VS. PLC DATA		X					
SAMPLING (SEE TABLE IN NPDES ATTACHMENTS)		X					
AIR STRIPPER - CHECK SOLIDS ACCUMULATION				X			
CHECK BAG FILTER PRESSURES	X				Y	N	
CHECK CARBON FILTER PRESSURES	X				Y	N	
AIR STRIPPER - CHECK BLOWER OPERATION AND PRESSURE DROP	X				Y	N	
AMP TRANSFER PUMP MOTORS				X			
TRANSFER PUMPS - PERFORM P.M. SERVICE				X			
AIR STRIPPER - MEASURE AIR FLOW, FULL INSPECTION				X			
CHECK & CALIBRATE INSTRUMENTATION				X			
MANUALLY OPERATE & CHECK VALVES				X			
MANUALLY TEST SAFETY INTERLOCKS			X				

Notes:

[1] Frequency that may be required is based on manufacturer data for the system equipment, system alarms, and Owner requirements

WELL ID	TIME	WATER LEVEL TOR	TOR ELEVATION	WATER ELEVATION TOR
MW-301D			970.44	
MW-414D			971.91	
MW-413D			970.13	
MW-416D			965.84	

VANDALIA-MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
TABLE 1 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 3/18/16
INSPECTION BY: BP

	MINIMUM FREQUENCY		INSPECTED/	CORRECTIVE	
	EVERY WEEK	EVERY MONTH	TESTED (YES or NO)	MEASURES REQ'D (YES or NO)	COMMENTS
SITE SAFETY					
FIRST AID KIT	X		Y	N	
EYEWASH STATION	X		Y	N	
FIRE EXTINGUISHERS\SMOKE DETECTORS	X		Y	N	
EMERGENCY LIGHTING	X		Y	N	
SITE ISSUES	X		Y	N	
SITE SECURITY					
FENCING		X			
GATES		X			
LOCKS		X			
SIGNS		X			
SITE		X			
SITE GROUNDS					
DRAINAGE DITCHES/SWALES		X			
BUILDING		X			
RECOVERY WELL		X			
ACCESS ROAD		X			
WASTE					
CARBON	X		Y	N	
SOLID	X		Y	N	

Notes:

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS MAINTENANCE PLAN
TABLE 2 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 3/18/16
INSPECTION BY: RP

	EVERY WEEK	EVERY MONTH	EVERY 3 MONTHS	MIN. 6 MO. OR AS REQD(1)	INSPECTED/ TESTED (YES) OR (NO)	CORRECTIVE MEASURES REQ'D (YES or NO)	COMMENTS
GROUNDWATER SYSTEM							
VERIFY EQUIPMENT IS OPERATING WITH NO DAMAGE OR LEAKS	X				Y	N	
LOG SYSTEM OPERATING PARAMETERS	X				Y	N	
USE PLC TO CHECK SYSTEM OPERATING CONDITIONS	X				Y	N	
TEST LEVEL CONTROLS ETC.	X				Y	N	
USE PLC TO VERIFY DIAL OUT STATUS IS ENABLED	X				Y	N	
INSPECT CONTAINMENT SUMP/FLOOR SEAL	X				Y	N	
INSPECT BUILDING AND FOUNDATION INTEGRITY	X				Y	N	
INSPECT\VERIFY HEATING AND VENTILATING SYSTEM OPERATIONS				X			Test Trip Set Point and Clean Screens and Louvers
INSPECT\VISUALLY CHECK LIGHTING SYSTEM & EMERGENCY SYSTEM	X				Y	N	
VISUALLY INSPECT ELECTRICAL SYSTEM	X				Y	N	
VERIFY PUMP OPERATION	X				Y	N	
WELL LEVELS - MANUALLY CHECK VWATER LEVEL VS. PLC DATA		X					
SAMPLING (SEE TABLE IN NPDES ATTACHMENTS)		X					
AIR STRIPPER - CHECK SOLIDS ACCUMULATION				X			
CHECK BAG FILTER PRESSURES	X				Y	N	
CHECK CARBON FILTER PRESSURES	X				Y	N	
AIR STRIPPER - CHECK BLOWER OPERATION AND PRESSURE DROP	X				Y	N	
AMP TRANSFER PUMP MOTORS				X			
TRANSFER PUMPS - PERFORM P.M. SERVICE				X			
AIR STRIPPER - MEASURE AIR FLOW, FULL INSPECTION				X			
CHECK & CALIBRATE INSTRUMENTATION				X			
MANUALLY OPERATE & CHECK VALVES				X			
MANUALLY TEST SAFETY INTERLOCKS			X				

Notes:

[1] Frequency that may be required is based on manufacturer data for the system equipment, system alarms, and Owner requirements

→ 25.20

WELL ID	TIME	WATER LEVEL TOR	TOR ELEVATION	WATER ELEVATION TOR
MW-301D	1455	~~24.60~~	970.44	~~945.84~~ → 945.24
MW-414D	1410	26.55	971.91	945.36
MW-413D	1405	24.85	970.13	945.28
MW-416D	1400	20.56	965.84	945.28

VANDALIA-MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
TABLE 1 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 3/25/16
INSPECTION BY: ELS

	MINIMUM FREQUENCY		INSPECTED/	CORRECTIVE	
	EVERY WEEK	EVERY MONTH	TESTED (YES or NO)	MEASURES REQ'D (YES or NO)	COMMENTS
SITE SAFETY					
FIRST AID KIT	X		Y	N	
EYEWASH STATION	X		Y	N	
FIRE EXTINGUISHERS\SMOKE DETECTORS	X		Y	N	SERVICE NEED APRIL 2016 EXTINGUISHER
EMERGENCY LIGHTING	X		Y	N	
SITE ISSUES	X		Y	N	
SITE SECURITY					
FENCING		X	Y	N	
GATES		X	Y	N	
LOCKS		X	Y	N	
SIGNS		X	Y	N	
SITE		X	Y	N	
SITE GROUNDS					
DRAINAGE DITCHES/SWALES		X	Y	N	
BUILDING		X	Y	N	
RECOVERY WELL		X	Y	N	
ACCESS ROAD		X	Y	N	
WASTE					
CARBON	X		Y	N	
SOLID	X		Y	N	

Notes:

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS MAINTENANCE PLAN
TABLE 2 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 3/25/16
INSPECTION BY: ELS

	EVERY WEEK	EVERY MONTH	EVERY 3 MONTHS	MIN. 6 MO. OR AS REQD(1)	INSPECTED/ TESTED (YES) OR (NO)	CORRECTIVE MEASURES REQ'D (YES or NO)	COMMENTS
GROUNDWATER SYSTEM							
VERIFY EQUIPMENT IS OPERATING WITH NO DAMAGE OR LEAKS	X				Y	N	
LOG SYSTEM OPERATING PARAMETERS	X				Y	N	
USE PLC TO CHECK SYSTEM OPERATING CONDITIONS	X				Y	N	
TEST LEVEL CONTROLS ETC.	X				Y	N	
USE PLC TO VERIFY DIAL OUT STATUS IS ENABLED	X				Y	N	
INSPECT CONTAINMENT SUMP/FLOOR SEAL	X				Y	N	
INSPECT BUILDING AND FOUNDATION INTEGRITY	X				Y	N	
INSPECT\VERIFY HEATING AND VENTILATING SYSTEM OPERATIONS				X			Test Trip Set Point and Clean Screens and Louvers
INSPECT\VISUALLY CHECK LIGHTING SYSTEM & EMERGENCY SYSTEM	X				Y	N	
VISUALLY INSPECT ELECTRICAL SYSTEM	X				Y	N	
VERIFY PUMP OPERATION	X				Y	N	
WELL LEVELS - MANUALLY CHECK VWATER LEVEL VS. PLC DATA		X			Y	N	
SAMPLING (SEE TABLE IN NPDES ATTACHMENTS)		X			Y	N	
AIR STRIPPER - CHECK SOLIDS ACCUMULATION				X			
CHECK BAG FILTER PRESSURES	X				Y	N	
CHECK CARBON FILTER PRESSURES	X				Y	N	
AIR STRIPPER - CHECK BLOWER OPERATION AND PRESSURE DROP	X				Y	N	
AMP TRANSFER PUMP MOTORS				X			
TRANSFER PUMPS - PERFORM P.M. SERVICE				X			
AIR STRIPPER - MEASURE AIR FLOW, FULL INSPECTION				X			
CHECK & CALIBRATE INSTRUMENTATION				X			
MANUALLY OPERATE & CHECK VALVES				X			
MANUALLY TEST SAFETY INTERLOCKS			X		Y	N	

Notes:

[1] Frequency that may be required is based on manufacturer data for the system equipment, system alarms, and Owner requirements

WELL ID	TIME	WATER LEVEL TOR	TOR ELEVATION	WATER ELEVATION TOR
MW-301D			970.44	
MW-414D			971.91	
MW-413D			970.13	
MW-416D			965.84	

* Water levels not recorded MW-301D Submerged due to recent rain event.

VANDALIA-MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
TABLE 1 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 3-30-16
INSPECTION BY: Mike Rasmussen

	MINIMUM FREQUENCY		INSPECTED/	CORRECTIVE	
	EVERY WEEK	EVERY MONTH	TESTED (YES or NO)	MEASURES REQ'D (YES or NO)	COMMENTS
SITE SAFETY					
FIRST AID KIT	X		Y	N	
EYEWASH STATION	X		Y	N	
FIRE EXTINGUISHERS\SMOKE DETECTORS	X		Y	N	-New Fire Extinguisher needed in April 16
EMERGENCY LIGHTING	X		Y	N	
SITE ISSUES	X		Y	N	
SITE SECURITY					
FENCING		X	Y	N	
GATES		X	Y	N	
LOCKS		X	Y	N	
SIGNS		X	Y	N	
SITE		X	Y	N	
SITE GROUNDS					
DRAINAGE DITCHES/SWALES		X	Y	N	
BUILDING		X	Y	N	
RECOVERY WELL		X	N	NA	
ACCESS ROAD		X	Y	N	
WASTE					
CARBON	X		Y	N	
SOLID	X		Y	N	-Trash taken to Post 3 # Dumped

Notes:

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS MAINTENANCE PLAN
TABLE 2 - SITE INSPECTION CHECKLIST

INSPECTION DATE: 3-30-16
INSPECTION BY: Mike Rasmussen

	EVERY WEEK	EVERY MONTH	EVERY 3 MONTHS	MIN. 6 MO. OR AS REQD(1)	INSPECTED/ TESTED (YES) OR (NO)	CORRECTIVE MEASURES REQ'D (YES or NO)	COMMENTS
GROUNDWATER SYSTEM					Y	N	+ Small Leaks w/ some Banjo Fittings, May want to replace fittings
VERIFY EQUIPMENT IS OPERATING WITH NO DAMAGE OR LEAKS	X				Y	N	
LOG SYSTEM OPERATING PARAMETERS	X				Y	N	
USE PLC TO CHECK SYSTEM OPERATING CONDITIONS	X				Y	N	
TEST LEVEL CONTROLS ETC.	X				Y	N	
USE PLC TO VERIFY DIAL OUT STATUS IS ENABLED	X				Y	N	
INSPECT CONTAINMENT SUMP/FLOOR SEAL	X				Y	N	+ Add Grate to Floor of Drain Basin
INSPECT BUILDING AND FOUNDATION INTEGRITY	X				Y	N	
INSPECT\VERIFY HEATING AND VENTILATING SYSTEM OPERATIONS				X	Y	NA	Test Trip Set Point and Clean Screens and Louvers
INSPECT\VISUALLY CHECK LIGHTING SYSTEM & EMERGENCY SYSTEM	X				Y	N	
VISUALLY INSPECT ELECTRICAL SYSTEM	X				Y	N	
VERIFY PUMP OPERATION	X				Y	N	
WELL LEVELS - MANUALLY CHECK VWATER LEVEL VS. PLC DATA		X			Y	NA	
SAMPLING (SEE TABLE IN NPDES ATTACHMENTS)		X			Y	NA	
AIR STRIPPER - CHECK SOLIDS ACCUMULATION				X	Y	NA	
CHECK BAG FILTER PRESSURES	X				Y	N	
CHECK CARBON FILTER PRESSURES	X				Y	N	
AIR STRIPPER - CHECK BLOWER OPERATION AND PRESSURE DROP	X				Y	N	
AMP TRANSFER PUMP MOTORS				X	Y	NA	
TRANSFER PUMPS - PERFORM P.M. SERVICE				X	Y	NA	
AIR STRIPPER - MEASURE AIR FLOW, FULL INSPECTION				X	Y	NA	
CHECK & CALIBRATE INSTRUMENTATION				X	Y	NA	
MANUALLY OPERATE & CHECK VALVES				X	Y	NA	
MANUALLY TEST SAFETY INTERLOCKS			X		Y	NA	

Notes:

[1] Frequency that may be required is based on manufacturer data for the system equipment, system alarms, and Owner requirements

WELL ID	TIME	WATER LEVEL TOR	TOR ELEVATION	WATER ELEVATION TOR
MW-301D	10:30	26.47	970.44	943.97
MW-414D	10:40	27.81	971.91	944.10
MW-413D	10:50	26.08	970.13	944.05
MW-416D	11:00	21.85	965.84	943.99

Attachment F
Bedrock Groundwater Migration Control System
Shutdown Reports

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
FIGURE 1 - SITE VISIT REPORT FORM

DATE:	10/23/15
TIME:	1430
BY:	RP

SYSTEM NAME: GWMC SYSTEM COMPONENT: Carbon Vessels

REASON FOR REPORT:

Manual Shut down

REASON FOR SHUTDOWN:

Backwash

ACTION TAKEN:

Perform backwash to lower pressure build up in Carbon Vessel. System back on AUTO

SHUTDOWN DATE & TIME: 10/23/15 @ 1030

START-UP DATE & TIME: 10/23/15 @ 1350

COMMENTS/SUGGESTIONS:

REQUIRED REPORT NOTIFICATION PER SECTION 4.0

IMMEDIATE ☐ NON-CRITICAL ☐ ROUTINE ☐

INDIVIDUAL NOTIFIED _____

ACTION/RESPONSE _____

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
FIGURE 1 - SITE VISIT REPORT FORM

DATE:	10-28-15
TIME:	1000
BY:	ELS

SYSTEM NAME: GWMC SYSTEM COMPONENT: ASL&HH

REASON FOR REPORT: Automatic Shut down

REASON FOR SHUTDOWN: Air Stripper Level Switch High High Alarm triggered from area rain event

ACTION TAKEN: Pumped down air stripper; changed bag filters and turned system back on.

SHUTDOWN DATE & TIME: 10/27/15 18:06

START-UP DATE & TIME: 10/28/15 11:40

COMMENTS/SUGGESTIONS:

REQUIRED REPORT NOTIFICATION PER SECTION 4.0

IMMEDIATE ☐ NON-CRITICAL ☐ ROUTINE ☐

INDIVIDUAL NOTIFIED _____

ACTION/RESPONSE _____

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
FIGURE 1 - SITE VISIT REPORT FORM

DATE:	11-1-15
TIME:	11:00
BY:	ELS

SYSTEM NAME: GWMC SYSTEM COMPONENT: ASLSHH

REASON FOR REPORT: Automatic System Shutdown

REASON FOR SHUTDOWN: Air Stripper Level Switch High High Triggered.

ACTION TAKEN: Pump down sight glass, change bag filters and restart system

SHUTDOWN DATE & TIME: 11/1/15 00:35

START-UP DATE & TIME: 11/1/15 10:15

COMMENTS/SUGGESTIONS:

REQUIRED REPORT NOTIFICATION PER SECTION 4.0

IMMEDIATE ☐ NON-CRITICAL ☐ ROUTINE ☐

INDIVIDUAL NOTIFIED _____

ACTION/RESPONSE _____

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
FIGURE 1 - SITE VISIT REPORT FORM

DATE:	11-6-15
TIME:	1145
BY:	ECS

SYSTEM NAME: GWMC **SYSTEM COMPONENT:** ASLSHH

REASON FOR REPORT: Automatic Shutdown

REASON FOR SHUTDOWN: Air Stripper Level Switch High High Alarm
Rain event

ACTION TAKEN: Pump down site glass, change bag filters,
restart system

SHUTDOWN DATE & TIME: 11-6-15 02:04

START-UP DATE & TIME: 11-6-15 11:30

COMMENTS/SUGGESTIONS:

REQUIRED REPORT NOTIFICATION PER SECTION 4.0

IMMEDIATE ☐ **NON-CRITICAL** ☐ **ROUTINE** ☐

INDIVIDUAL NOTIFIED _____

ACTION/RESPONSE _____

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
FIGURE 1 - SITE VISIT REPORT FORM

DATE:	11-20-15
TIME:	16:15
BY:	ECS

SYSTEM NAME: GWMC **SYSTEM COMPONENT:** ASLSHH

REASON FOR REPORT: AUTOMATIC SHUTDOWN

REASON FOR SHUTDOWN: AIR STRIPPER LEVEL SWITCH HIGH HIGH ALARM TRIGGERED -

ACTION TAKEN: PUMP DOWN SIGHT GLASS, CHANGE BAG FILTERS, CHANGE OUT CARBON PUMP, REPLACE ELECTRICAL WIRING, CHECKED SYSTEM FOR BLOCKAGE, RESTART SYSTEM.

SHUTDOWN DATE & TIME: 11/10/15

START-UP DATE & TIME: 11/20/15 15:49

COMMENTS/SUGGESTIONS:

CLEAN OUT BOTTOM OF AIR STRIPPER SUMP

REQUIRED REPORT NOTIFICATION PER SECTION 4.0

IMMEDIATE ☐ **NON-CRITICAL** ☐ **ROUTINE** ☐

INDIVIDUAL NOTIFIED _____

ACTION/RESPONSE _____

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
FIGURE 1 - SITE VISIT REPORT FORM

DATE:	12-8-15
TIME:	
BY:	ELS

SYSTEM NAME: GWMC **SYSTEM COMPONENT:** CARBON

REASON FOR REPORT: MANUAL SHUTDOWN FOR SYSTEM BACKWASH

REASON FOR SHUTDOWN: SYSTEM BACKWASH OF CARBON VESSELS

ACTION TAKEN: BACKWASH CARBON VESSELS, CHANGE BAG FILTERS
RESTART SYSTEM.

SHUTDOWN DATE & TIME: 12/8/15 10:50

START-UP DATE & TIME: 12/8/15 14:22

COMMENTS/SUGGESTIONS:

REQUIRED REPORT NOTIFICATION PER SECTION 4.0

IMMEDIATE ☐ **NON-CRITICAL** ☐ **ROUTINE** ☐

INDIVIDUAL NOTIFIED _____

ACTION/RESPONSE _____

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
FIGURE 1 - SITE VISIT REPORT FORM

DATE: 12-9-15

TIME: 16:30

BY: WJR

SYSTEM NAME: GWMC SYSTEM COMPONENT: MC Piping

REASON FOR REPORT: Manual shutdown

REASON FOR SHUTDOWN: Piping modifications at AS Transfer Pump

ACTION TAKEN: Assembled fittings

SHUTDOWN DATE & TIME: 12/9/15 14:05

START-UP DATE & TIME: 12/9/15 16:00

COMMENTS/SUGGESTIONS:

REQUIRED REPORT NOTIFICATION PER SECTION 4.0

IMMEDIATE ☐ NON-CRITICAL ☐ ROUTINE ☐

INDIVIDUAL NOTIFIED

ACTION/RESPONSE

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
FIGURE 1 - SITE VISIT REPORT FORM

DATE:	12/15/15
TIME:	1400
BY:	RP

SYSTEM NAME: GWMC SYSTEM COMPONENT: ASLSHH

REASON FOR REPORT:

Automatic shut down

REASON FOR SHUTDOWN:

ASLSHH alarm tiggered

ACTION TAKEN:

change BF, Pump down AS sump

SHUTDOWN DATE & TIME: 12/15/15 @ 1330

START-UP DATE & TIME: 12/15/15 @ 1340

COMMENTS/SUGGESTIONS:

REQUIRED REPORT NOTIFICATION PER SECTION 4.0

IMMEDIATE ☐ NON-CRITICAL ☐ ROUTINE ☐

INDIVIDUAL NOTIFIED _____

ACTION/RESPONSE _____

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
FIGURE 1 - SITE VISIT REPORT FORM

DATE:	12-21-15
TIME:	12:30
BY:	ELS

SYSTEM NAME: GWMC **SYSTEM COMPONENT:** ASLSHH

REASON FOR REPORT: Automatic Shutdown Alarm

REASON FOR SHUTDOWN: Air Stripper Level Switch High High Alarm Triggered

ACTION TAKEN: Pump Down Sight glass, change bag filters, restart system

SHUTDOWN DATE & TIME: 12/21/15 10:38

START-UP DATE & TIME: 12/21/15 12:10

COMMENTS/SUGGESTIONS:

REQUIRED REPORT NOTIFICATION PER SECTION 4.0

IMMEDIATE ☐ **NON-CRITICAL** ☐ **ROUTINE** ☐

INDIVIDUAL NOTIFIED _____

ACTION/RESPONSE _____

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
FIGURE 1 - SITE VISIT REPORT FORM

DATE:	1/19/16
TIME:	1530
BY:	PB

SYSTEM NAME: SWMC SYSTEM COMPONENT: Carbon Vessels

REASON FOR REPORT:

Manual Shut down.

REASON FOR SHUTDOWN:

Perform Ballwash. to Reduce ball pressure in Carbon Vessel.

ACTION TAKEN:

Conducted Ballwash.

SHUTDOWN DATE & TIME: 1/19/16 @ 1030

START-UP DATE & TIME: 1/19/16 @ 1500

COMMENTS/SUGGESTIONS:

REQUIRED REPORT NOTIFICATION PER SECTION 4.0

IMMEDIATE ☐ NON-CRITICAL ☐ ROUTINE ☐

INDIVIDUAL NOTIFIED _____

ACTION/RESPONSE _____

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
FIGURE 1 - SITE VISIT REPORT FORM

DATE:	1-25-16
TIME:	11:00
BY:	ELS

SYSTEM NAME: GWMC **SYSTEM COMPONENT:** SMPLSH

REASON FOR REPORT: Automatic Shutdown due to Sump level switch high alarm.

REASON FOR SHUTDOWN: Sump pump Failed to pump water out of Sump - Water due to small leak from Banjo fitting @ effluent.

ACTION TAKEN: Fixed sump pump to pump water out of sump; Changed bag filters; turned system back on. Banjo fitting to be replaced @ later time

SHUTDOWN DATE & TIME: 1/24/2016 @ 20:33

START-UP DATE & TIME: 1/25/2016 @ 09:30

COMMENTS/SUGGESTIONS:

REQUIRED REPORT NOTIFICATION PER SECTION 4.0

IMMEDIATE ☐ **NON-CRITICAL** ☐ **ROUTINE** ☐

INDIVIDUAL NOTIFIED _____

ACTION/RESPONSE _____

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
FIGURE 1 - SITE VISIT REPORT FORM

DATE:	2-3-16
TIME:	10:15
BY:	MR

SYSTEM NAME: GWMC SYSTEM COMPONENT: Clogged Bag Filter

REASON FOR REPORT: Automatic Shutdown

REASON FOR SHUTDOWN: - Clogged Bag Filters
Increase in O.B. due to Large Rain Event

ACTION TAKEN: Change Bag Filters, Clean Sight Glass, Restart

SHUTDOWN DATE & TIME: 2-3-16 @ 00:40

START-UP DATE & TIME: 2-3-16 @ 10:10

COMMENTS/SUGGESTIONS:
Get Brush to Clean Sight Glass

REQUIRED REPORT NOTIFICATION PER SECTION 4.0

IMMEDIATE ☐ NON-CRITICAL ☐ ROUTINE ☐

INDIVIDUAL NOTIFIED None

ACTION/RESPONSE None

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
FIGURE 1 - SITE VISIT REPORT FORM

DATE:	2/24/16
TIME:	1210
BY:	RP

SYSTEM NAME: GWMC SYSTEM COMPONENT: ASLSHH

REASON FOR REPORT:

Automatic Shut down

REASON FOR SHUTDOWN:

Rain event; caused ASLSHH to trigger

ACTION TAKEN:

Pump down AS Sump; change BF; Re-start system

SHUTDOWN DATE & TIME: 0440; 2/24/16

START-UP DATE & TIME: 1145; 2/24/16

COMMENTS/SUGGESTIONS:

REQUIRED REPORT NOTIFICATION PER SECTION 4.0

IMMEDIATE ☐ NON-CRITICAL ☐ ROUTINE ☐

INDIVIDUAL NOTIFIED _____

ACTION/RESPONSE _____

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
FIGURE 1 - SITE VISIT REPORT FORM

DATE:	3/21/2016
TIME:	21:00
BY:	ELS

SYSTEM NAME: GWMS SYSTEM COMPONENT: Holding Tank

REASON FOR REPORT: MANUAL SHUTDOWN FOR ACID WASH

REASON FOR SHUTDOWN: ACID WASH

ACTION TAKEN: SYSTEM ACID WASH BY HERITAGE.

SHUTDOWN DATE & TIME: 3/21/16 07:06

START-UP DATE & TIME: 3/21/16 20:30

COMMENTS/SUGGESTIONS:

REQUIRED REPORT NOTIFICATION PER SECTION 4.0

IMMEDIATE ☐ NON-CRITICAL ☐ ROUTINE ☐

INDIVIDUAL NOTIFIED _____

ACTION/RESPONSE _____

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
FIGURE 1 - SITE VISIT REPORT FORM

DATE:	3/25/16
TIME:	
BY:	ELS

SYSTEM NAME: GWMC SYSTEM COMPONENT: HOSES & FITTINGS

REASON FOR REPORT: MANUAL SHUTDOWN FOR HOSE REPAIRS

REASON FOR SHUTDOWN: MAINTENANCE OF HOSES & FITTINGS THAT ARE LEAKING

ACTION TAKEN: REPAIR/REPLACE LEAKING FITTING & HOSES

SHUTDOWN DATE & TIME: 3/25/2016 10:47

START-UP DATE & TIME: 3/25/2016 13:20

COMMENTS/SUGGESTIONS:

REQUIRED REPORT NOTIFICATION PER SECTION 4.0

IMMEDIATE ☐ NON-CRITICAL ☐ ROUTINE ☐

INDIVIDUAL NOTIFIED _____

ACTION/RESPONSE _____

VANDALIA - MIGRATION CONTROL SYSTEM
OPERATIONS AND MAINTENANCE PLAN
FIGURE 1 - SITE VISIT REPORT FORM

DATE:	3-30-16
TIME:	8:30
BY:	M.R.

SYSTEM NAME: GW MC SYSTEM COMPONENT: Sump Pump

REASON FOR REPORT: Automatic Shutdown, Sump Pump High Level Switch

REASON FOR SHUTDOWN:
Sump Pump High Level Switch, Pump clogged

ACTION TAKEN: - Reset & unclog sump pump, Change Bag Filters, Restart system

SHUTDOWN DATE & TIME: 3-29-16 @ 20:22

START-UP DATE & TIME: 3-30-16 @ 09:00

COMMENTS/SUGGESTIONS:
- Set Grill or Grate underneath Sump Pump, keep bottom of pump off the floor

REQUIRED REPORT NOTIFICATION PER SECTION 4.0 NA

IMMEDIATE ☐ NON-CRITICAL ☐ ROUTINE ☐

INDIVIDUAL NOTIFIED _____

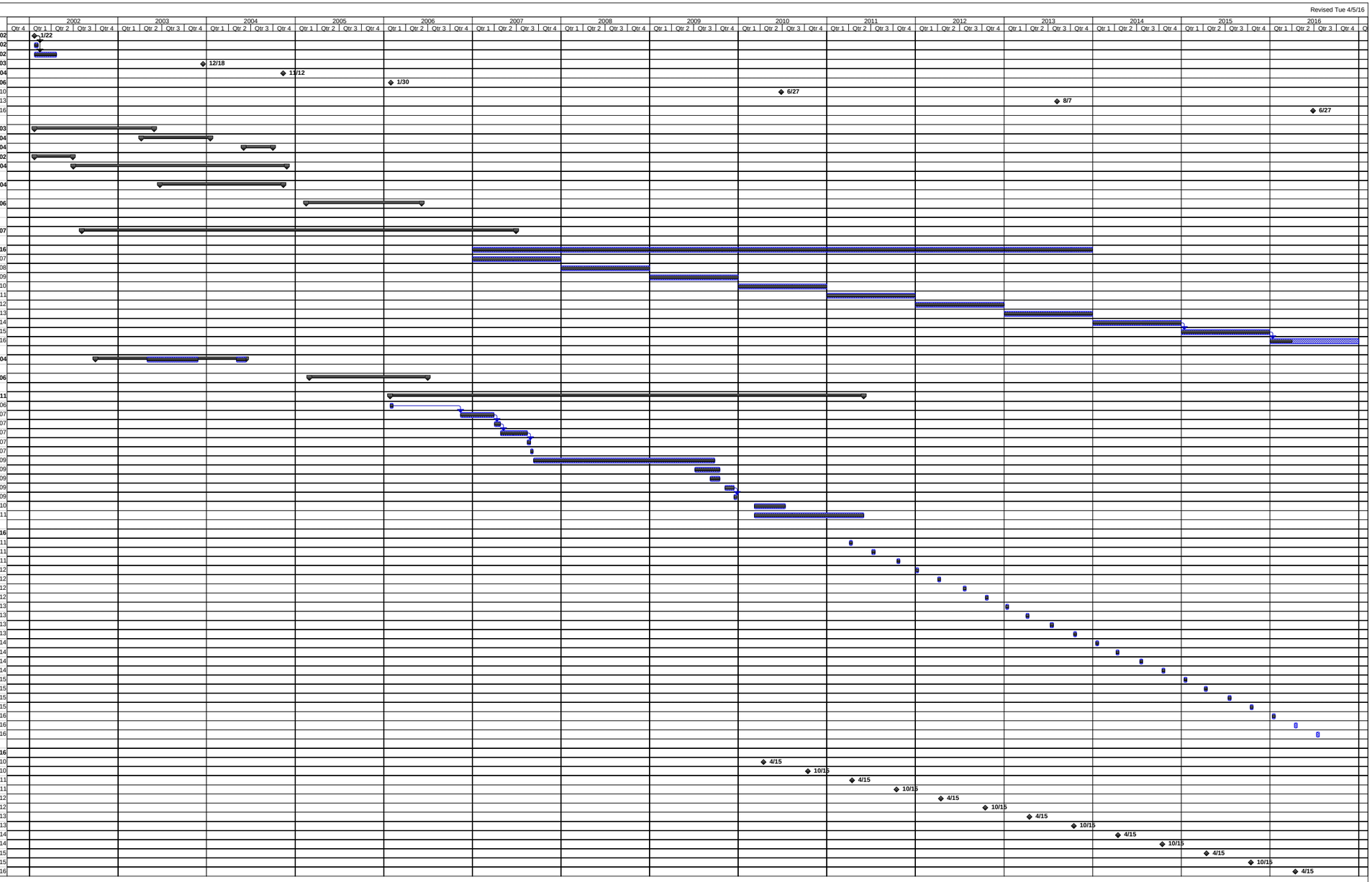
ACTION/RESPONSE _____

Attachment G
Project Schedule

SCHEDULE: MAHLE BEHR DAYTON LLC, VANDALIA,OHIO CORRECTIVE ACTION

Revised Tue 4/5/16

ID	Task Name	% Complete	Duration	Start	Finish
1	**Streamlined Order Executed**	100%	**0 days**	**Tue 1/22/02**	**Tue 1/22/02**
2	**Project Manager Designation**	100%	**11 days**	**Tue 1/22/02**	**Tue 2/5/02**
3	**Interim Measure & Implementation Report**	100%	**65 days**	**Tue 1/22/02**	**Mon 4/22/02**
4	**EI Report - Human Exposures: AOC Deadline 12/31/03**	100%	**1 day**	**Thu 12/18/03**	**Thu 12/18/03**
5	**EI Report - GW Stabilization: AOC Deadline 12/31/04**	100%	**1 day**	**Fri 11/12/04**	**Fri 11/12/04**
6	**Final Corrective Measures Proposal: Extension Granted to 1/30/06**	100%	**1 day**	**Mon 1/30/06**	**Mon 1/30/06**
7	**Three Year Assessment Report 1**	100%	0 days	Sun 6/27/10	Sun 6/27/10
8	**Three Year Assessment Report 2**	100%	0 days	Wed 8/7/13	Wed 8/7/13
9	**Three Year Assessment Report 3**	0%	0 days	Mon 6/27/16	Mon 6/27/16
10					
11	**Offsite Groundwater Investigation**	**100%**	**353 days**	**Tue 1/22/02**	**Thu 5/29/03**
26	**Overburden Groundwater Migration Control Interim Measure**	**100%**	**206 days**	**Mon 4/7/03**	**Fri 1/16/04**
33	**GW Stabilization EI Monitoring (2 mos)**	**100%**	**87 days**	**Wed 6/2/04**	**Thu 9/30/04**
38	**Onsite Investigation Work Plan**	**100%**	**114 days**	**Tue 1/22/02**	**Fri 6/28/02**
48	**Onsite Work Plan Implementation**	**100%**	**631 days**	**Mon 7/1/02**	**Fri 11/26/04**
55					
56	**Environmental Indicators Reports**	**100%**	**366 days**	**Mon 6/23/03**	**Fri 11/12/04**
72					
73	**Investigation Report**	**100%**	**340 days**	**Tue 2/15/05**	**Mon 6/5/06**
80					
81					
82	**Interim Measures**	**100%**	**1284 days**	**Mon 8/5/02**	**Fri 6/29/07**
83					
84	**GW Migration Control O&M**	**92%**	**2616 days**	**Mon 1/1/07**	**Sat 12/31/16**
85	GW Migration Control O&M 5	100%	264 days	Mon 1/1/07	Mon 12/31/07
86	GW Migration Control O&M 6	100%	262 days	Tue 1/1/08	Wed 12/31/08
87	GW Migration Control O&M 7	100%	261 days	Thu 1/1/09	Thu 12/31/09
88	GW Migration Control O&M 8	100%	261 days	Fri 1/1/10	Fri 12/31/10
89	GW Migration Control O&M 9	100%	261 days	Sat 1/1/11	Fri 12/30/11
90	GW Migration Control O&M 10	100%	262 days	Sun 1/1/12	Mon 12/31/12
91	GW Migration Control O&M 11	100%	261 days	Tue 1/1/13	Tue 12/31/13
92	GW Migration Control O&M 12	100%	261 days	Wed 1/1/14	Wed 12/31/14
93	GW Migration Control O&M 13	100%	261 days	Thu 1/1/15	Thu 12/31/15
94	GW Migration Control O&M 14	25%	262 days	Fri 1/1/16	Sat 12/31/16
95					
96	**DNAPL Recovery Design Build**	**100%**	**446 days**	**Mon 9/30/02**	**Fri 6/11/04**
100					
101	**Corrective Measure Proposal**	**100%**	**350 days**	**Mon 2/28/05**	**Fri 6/30/06**
108					
109	**Second Sand Recovery Design Build**	**100%**	**1400 days**	**Fri 1/27/06**	**Wed 6/1/11**
110	Geoprobe and Recovery Well Install	100%	8 days	Fri 1/27/06	Tue 2/7/06
111	Pump Tests	100%	100 days	Mon 11/13/06	Fri 3/30/07
112	Prepare Engineering Assessment	100%	20 days	Mon 4/2/07	Thu 4/26/07
113	Preliminary Design and System Siting	100%	80 days	Fri 4/27/07	Wed 8/15/07
114	Interim System Design	100%	2 wks	Wed 8/15/07	Tue 8/28/07
115	Interim System Install/Start-up	100%	8 days	Wed 8/29/07	Fri 9/7/07
116	Permanent System Final Design	100%	535 days	Mon 9/10/07	Fri 9/25/09
117	Procurement (RFQs, Bid Review, Componenet Purchases)	100%	75 days	Mon 7/6/09	Fri 10/16/09
118	Permitting (NPDES)	100%	30 days	Mon 9/7/09	Fri 10/16/09
119	Build System	100%	26 days	Sat 11/7/09	Mon 12/14/09
120	System Start-up	100%	10 days	Mon 12/14/09	Fri 12/25/09
121	Construction Completion Report	100%	92 days	Mon 3/8/10	Tue 7/13/10
122	Updated O&M Plan	100%	324 days	Mon 3/8/10	Wed 6/1/11
123					
124	**Quarterly GW Sampling**	**91%**	**1386 days**	**Mon 4/4/11**	**Fri 7/22/16**
125	Quarterly GW Sampling 38	100%	2 wks	Mon 4/4/11	Fri 4/15/11
126	Quarterly GW Sampling 39	100%	2 wks	Tue 7/5/11	Mon 7/18/11
127	Quarterly GW Sampling 40	100%	2 wks	Mon 10/17/11	Fri 10/28/11
128	Quarterly GW Sampling 41	100%	2 wks	Mon 1/2/12	Fri 1/13/12
129	Quarterly GW Sampling 42	100%	2 wks	Mon 4/2/12	Fri 4/13/12
130	Quarterly GW Sampling 43	100%	2 wks	Mon 7/16/12	Fri 7/27/12
131	Quarterly GW Sampling 44	100%	2 wks	Mon 10/15/12	Fri 10/26/12
132	Quarterly GW Sampling 45	100%	2 wks	Mon 1/7/13	Fri 1/18/13
133	Quarterly GW Sampling 46	100%	2 wks	Mon 4/1/13	Fri 4/12/13
134	Quarterly GW Sampling 47	100%	2 wks	Tue 7/9/13	Mon 7/22/13
135	Quarterly GW Sampling 48	100%	2 wks	Mon 10/14/13	Fri 10/25/13
136	Quarterly GW Sampling 49	100%	2 wks	Mon 1/13/14	Fri 1/24/14
137	Quarterly GW Sampling 50	100%	2 wks	Mon 4/7/14	Fri 4/18/14
138	Quarterly GW Sampling 51	100%	2 wks	Mon 7/14/14	Fri 7/25/14
139	Quarterly GW Sampling 52	100%	2 wks	Mon 10/13/14	Fri 10/24/14
140	Quarterly GW Sampling 53	100%	2 wks	Mon 1/12/15	Fri 1/23/15
141	Quarterly GW Sampling 54	100%	2 wks	Mon 4/6/15	Fri 4/17/15
142	Quarterly GW Sampling 55	100%	2 wks	Mon 7/13/15	Fri 7/24/15
143	Quarterly GW Sampling 56	100%	2 wks	Mon 10/12/15	Fri 10/23/15
144	Quarterly GW Sampling 57	100%	2 wks	Mon 1/11/16	Fri 1/22/16
145	Quarterly GW Sampling 58	0%	2 wks	Mon 4/11/16	Fri 4/22/16
146	Quarterly GW Sampling 59	0%	2 wks	Mon 7/11/16	Fri 7/22/16
147					
148	**Progress Reports**	**100%**	**1568 days**	**Thu 4/15/10**	**Fri 4/15/16**
149	Progress Reports 28	100%	0 days	Thu 4/15/10	Thu 4/15/10
150	Progress Reports 29	100%	0 days	Fri 10/15/10	Fri 10/15/10
151	Progress Reports 30	100%	0 days	Fri 4/15/11	Fri 4/15/11
152	Progress Reports 31	100%	0 days	Sat 10/15/11	Sat 10/15/11
153	Progress Reports 31	100%	0 days	Sun 4/15/12	Sun 4/15/12
154	Progress Reports 32	100%	0 days	Mon 10/15/12	Mon 10/15/12
155	Progress Reports 33	100%	0 days	Mon 4/15/13	Mon 4/15/13
156	Progress Report 34	100%	0 days	Tue 10/15/13	Tue 10/15/13
157	Progress Report 35	100%	0 days	Tue 4/15/14	Tue 4/15/14
158	Progress Report 36	100%	0 days	Wed 10/15/14	Wed 10/15/14
159	Progress Report 37	100%	0 days	Wed 4/15/15	Wed 4/15/15
160	Progress Report 38	100%	0 days	Thu 10/15/15	Thu 10/15/15
161	Progress Report 39	100%	0 days	Fri 4/15/16	Fri 4/15/16



Project: MAHLE Behr Dayton LLC, Vandalia, OH

Task | Milestone | Rolled Up Task | Rolled Up Milestone | External Tasks | External Milestone | Inactive Milestone | Manual Task | Manual Summary Rollup | Start-only | Progress

Split | Summary | Rolled Up Split | Rolled Up Progress | Project Summary | Inactive Task | Inactive Summary | Duration-only | Manual Summary | Finish-only | Deadline

Notes and Abbreviations:
1. Schedule may be revised as necessary to accomodate unexpected field conditions or inclement weather.